



Project no. **SSPE-CT-2004-502457**

Project acronym: **EU-MED AGPOL**

Project full name:
**Impacts of agricultural trade liberalization between the EU
and Mediterranean countries**

Instrument type: Specific Targeted Project
Priority name : 8.1 Policy-oriented research

**Deliverable D18
Tunisian production and export potential for olive oil**

Expert Panel Analysis

Due date of deliverable : November 2005
Actual submission date : September 2006

Start date of project : 01 March 2004

Duration : 36 months

Organisation name of lead contractor for this deliverable :
CIHEAM- Institut Agronomique Méditerranéen de Montpellier (IAM-M France)

Project co. funded by the European Commission within the Sixth framework Programme (2002-2006)		
Dissemination Level		
PU	Public	PU
PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential only for members of the consortium (including the Commission Services)	

Report submitted by
Boubaker KARRAY
Ministère de l'agriculture et des ressources hydrauliques
Institut de l'olivier
Tunisia

Thanks

This research has been accomplished thanks to the 24 chosen experts to whom I am really grateful. Though they were very busy, but they have actively contributed to the fulfillment of the research objectives. They have put exceptional efforts in providing information, judgments and evaluations through the answers they have formulated during the two rounds of research. The suggestions, justifications and explanations that they have made at each question guaranteed the objectivity of the obtained results.

Table of content

	Page
Introduction	9
1. Research framework and objective	10
2. Olive oil sector in Tunisia: what performances in the horizons of 2015?	10
Methodology	15
1. The SWOT method (Strengths, Weaknesses, Opportunities and Threats)	16
2. The DELPHI method	17
3. The use of the two methods	19
3.1 Defining the research problem and objectives	20
3.2 Choice of experts	20
3.3 Preliminary identification of Strengths, Weaknesses, Opportunities and Threats determining the performances of olive oil sector in Tunisia.	22
3.4 Conception and administration of the questionnaires and statistic treatment of the results	22
Results	26
1. Strengths, Weaknesses, Opportunities and Threats (SWOT) determining the performances of olive oil sector in Tunisia.	27
1.1 Strengths	27
1.2 Weaknesses	33
1.3 Opportunities	38
1.4 Threats	43
2. Estimating the potential of the production and exportation of the Tunisian olive oil to the European market during the next 5 and 10 years	50
2.1 Estimating the production of the Tunisian olive oil during the next 5 and 10 years	50
2.2 Estimating exportations of the Tunisian olive oil to the European market during the next 5 and 10 years	52

2.2.1	Scenarios of partial liberalization	52
2.2.2	Scenarios of total liberalization	60
	Conclusion	63
	Bibliographic references	70
	Appendices	75

List of Tables

- Table 1** : Composition of the panel of experts who took part in the DELPHI analysis
- Table 2** : Contribution of the private sector to the overall olive oil exportations
- Table 3** : Evolution of olive oil importations in the USA, Canada, Japan and Australia
- Table 4** : Olive oil quotas granted to Third countries
- Table 5** : Distribution of the allotted budget according to the member countries
- Table 6** : Tariff equivalent and alert price for olive oil
- Table 7** : Intervention price for the storage and importation of olive oil
- Table 8** : Estimation of olive oil production in Tunisia during the next 5 and 10 years
- Table 9** : Estimation of olive oil exportations in bulk in the framework of the quota during the next 5 et 10 years (Increasing the quota without modifying its monthly distribution)
- Table10** : Estimation of olive oil exportations in package in the framework of the quota during the next 5 and 10 years (Increasing the quota without modifying its monthly distribution)
- Table11** : Estimation of olive oil exportations in bulk in the framework of the quota during the next 5 and 10 years (Increasing the quota and modifying its monthly distribution).
- Table12** : Estimation of olive oil exportations in package in the framework of the quota during the next 5 and 10 years (Increasing the quota and modifying its monthly distribution)
- Table13** : Estimation of olive oil exportations in the framework of Inward-processing regime during the next 5 and 10 years
- Table14** : Estimating the impact of canceling the Inward- processing regime on Tunisian exportations of olive oil to the European market
- Table15** : Estimation of olive oil exportations in bulk in the context of normal regime during the next 5 and 10 years
- Table16** : Estimation of olive oil exportations in package in the context of normal regime during the next 5 and 10 years
- Table17** : Estimation of olive oil exportations in bulk during the next 5 and 10 years (Partial liberalization including all regimes)

Table18 : Estimation of olive oil exportations in package during the next 5 and 10 years (Partial liberalization including all regimes)

Table19 : Estimation of total olive oil exportations during the next 5 and 10 years (Partial liberalization including all regimes)

Table20 : Estimation of olive oil exportations in bulk during the next 5 and 10 years (Total liberalization)

Table21 : Estimation of olive oil exportations in package during the next 5 and 10 years (Total liberalization)

Table22 : Estimation of organic olive oil exportations during the next 5 and 10 years

Table23 : Estimation of olive oil exportations in package during the next 5 and 10 years

List of Figures

- Fig 1** : Evolution of olives production in Tunisia (1991-2005)
- Fig 2** : Evolution of Tunisian olive oil exportations on the European market (1991-2005)
- Fig 3** : Ishikawa Diagram (Cause and effect diagram)

List of Appendices

- Appendix 1** : Estimation of the potential of the Tunisian olive oil production and exportation: 1^{er} round of the research
- Appendix 2** : Estimation of the potential of the Tunisian olive oil production and exportation: 2nd round of the research
- Appendix 3** : Production and Exportations of olive oil in Tunisia 1991-2005
- Appendix 4** : Evolution of the trade balance of food oils
- Appendix 5** : Tunisian contribution to the world production of olive oil
- Appendix 5 bis** : Tunisian contribution to the world exportations of olive oil
- Appendix 6** : European importations of olive oil according to the origins

Introduction

1. Research framework and objective

This work is carried out within the framework of EU-MED AGPOL project “Impact of Agricultural Trade Liberalization between the EU and Mediterranean Countries”. Its objective is to estimate the potential increase in olive oil production in Tunisia and exportations to the European Union within the next 3 to 10 years, using a panel of experts. This assessment is to make scenarios of total and partial liberalization of European importations in olive oil originating from Third countries. The horizon of 3 years was extended to 5 years. The objective of this work was willingly extended to include the identification of internal factors (Strengths and Weaknesses) and external factors (Opportunities and Threats) that will determine the possibilities of increasing olive oil production and exportations to the European market. This research is of major importance for Tunisia as well as for the European Union. For Tunisia, it allows to specify actions to take in order to reinforce the role of olive oil in international economy, and its position on the European market. For the European Union, it allows to identify measures to make use of within the framework of the Common Market Organization (CMO) of olive oil and table olives in order to ensure a better management of the common market.

2. Olive oil sector in Tunisia: what performances in the horizon of 2015?

The prospective, modern form of anticipation (1) has been attached great importance these last years. This participative systematic process of collective-intelligence construction for the future and for short, medium or long-term visions conceptions has for objective to illuminate decisions about the present, and to mobilize the necessary means for the engagement in common actions (2). This objective perfectly applies to the case of olive oil that constitutes a strategic export product in Tunisia.

The dynamics of the world market of olive oil, marked by the new consumers' and producers' emergence and by the modification of the demand structure in favor of the virgin oils, the new arrangements concerning markets liberalization (Common Market Organization of olive oil and table olives, WTO negotiations and bilateral and regional agreements), placed producing and exporting countries in an uncertain competitive economic context where the hold of conscience of future stakes and the engagement of adapted policy reforms have become imperative in order to reinforce the

economic, social and environmental role, as well as the competitiveness of this product.

In Tunisia, oil olive occupies 1667 thousand hectares, which correspond to 39.8% of cultivated farmlands. This cultivation constitutes the activity of a diversified range of production structures representing about 57% of the total size of farming concerns. These structures differ in terms of status (Agrocombinats, cooperative unit of production, development and exploitation society, technicians' shares and private exploitations), the pruning, work logic and performances. They are mainly private, of small size and of familial type (4).

Oil olive equally occupies an industrial fabric including 1660 oil mills having theoretical capacity for olive triturating of 31745 tons/day, 10 factories for the extraction of seeds oil which have a theoretical capacity of 2 thousand tons/day, 7 units for refining food oils having a total capacity of 900 tons/day, 24 units for conditioning having a capacity of 115 thousand tons, many soap factories, coal factories, and some naval industry and craftsmen factories.

The olive oil produced is mainly directed to exportation. This strategic orientation has been carried out through the commercial policies adopted since 1962. These policies have given great priority to olive oil exportation, while favoring seeds oils importation and the adjustment of their price to the consumption. Two main objectives are sought through these policies; on the one hand increasing currency receipts, and on the other hand, preserving the purchasing power of the most deprived social classes (5).

The available information shows that Tunisia produced 159 thousand tons of olive oil during the period 1991-2005. This production was quite fluctuant, and varied between a minimum of 30 thousand tons in 2001 and a maximum of 310 thousand tons in 1995. It declined and reached 142 thousand tons during the period 2001-2005 while it was of 184 thousand tons between 1996 and 2000, and of 151 thousand tons between 1991 and 1995. This fall is essentially due to the negative effect of draught years. It had obvious repercussions on the exportations. The quantities of exported olive oil were of 112 thousand tons on average during the period 1991-2005, which correspond to 70.4% of the production. These exportations, secured since 1994 by the Tunisian Olive Oil Office (ONH) and about 118 private exporters, have constantly gone down. They went down from 132 thousand tons during the period 1991-1995 to

111 thousand tons during the period 1996-2000, and to 93 thousand tons during the period 2001-2005.

The rest of the production is sold on the domestic market. The Tunisian household consumes 8.2 kg of olive oil, and 15.9 kg of seeds oil on average, annually, together with significant differences between the regions(6).

The Tunisian olive oil exportations are to 99% in bulk. They are mainly directed to the European market. Notice that the European importations originating from Third countries are not free. They have been controlled since 1966 through regulatory arrangements at the level of the Common Market Organization (CMO) of olive oil and table olives. These arrangements fix norms of quality and marketing, and deductions in normal regime, in Inward- processing regime, and in preferential regime (7 and 8). And they have constantly been adapted to the national and international situation in order to protect the common market, and to reinforce European exporters' competitiveness. Main adaptations have concerned importations in normal regime and in preferential regime. They have taken place following the expansion of the EEC (Membership of Greece in 1981, Spain and Portugal in 1986), and the liberalization of agricultural and agro food exchanges undertaken within the framework of the agreements of the Uruguay round, and partnership agreements with the Third countries. These adaptations have granted Tunisia total exemption from customs duties (NPF) for importations carried out within the framework of the quota and the regime of Inward- processing regime. Meanwhile, they have limited importations in normal regime that bears high reductions. In spite of the preferences granted to Tunisia, European importations originating from this country have gone down. They decreased from 117 thousand tons during the period 1991-95 to 97 thousand tons during the period 1996-2000, and to 83 thousand tons between 2001 and 2005.

The fall in the production and exportations of olive oil in Tunisia has affected the role of this product in the national economy, and its position on the European market. Surplus in the trade balance of food oils, the contribution of Tunisia to world production and exportations, and her part on the main exportation markets, especially the European market, have distinctly went down.

On the national level, olive oil exportations have slightly increased to a current price since the beginning of the 90s. But the contribution of this product to foods and

goods exportations has regressed. Seeds oils importations, that have increased, absorb 61% of olive oil exportation receipts. The surplus of the balance of trade for food oils is no more than 116.4 million TND, while it was of 135.3 million TND during the period 1996-2000, and of 145.5 million TND between 1991 and 1995. (Appendix 4)

On the international level, the Tunisian contribution is only of 4.41% to world production, and of 7.76% to world exportations (Appendix 5). The share of this product on the European market is but 8.8%. It was of 12.1% during the period 1996-2000, and of 17.2% between 1991 and 1995. To this market, Tunisia is still the first Third country supplier even though its position has regressed. European importations in olive oil originating from this country represent 10% of the overall importations originating from Third countries. This contribution was of 25% and 91% during the period 1991-1995, respectively. (Appendix 6)

With reference to the 70s and 80s, we have noticed that the Tunisian contribution to the world production and exportations, and the competitiveness of the Tunisian olive oil on the world market and the European market were higher (4).

This worrying situation leads us to question the future evolution of the production and exportation of this strategic product to the European market during the next 5 and 10 years, for scenarios of partial liberalization and total liberalization of European importations in olive oil originating from Third countries. But also question the main internal and external factors determining this evolution.

To answer this questioning, we have used two methods. The first, termed SWOT (Strength, Weaknesses, Opportunities and Threats) in English, and FFOM (Forces, Faiblesses, Opportunités et Menace) in French, constitutes a framework of diagnosis and strategic thought (9). It allows the identification of the main internal and external factors that will determine the ability of Tunisia to increase olive oil production and exportation to the European market.

The external factors concern world market dynamics (supply, demand and exchanges of olive oil), and the new arrangements for market liberalization (Common Market Organization of olive oil and table olives, WTO negotiations, and bilateral and regional agreements). Whereas the internal factors relate to the production and exportation system in Tunisia.

The second method, termed DELPHI, constitutes a common device for medium and long-term prospects, and for decision making. Applied to the olive oil sector in Tunisia, this method allows the elaboration of a consensus on the identified strengths, weaknesses, opportunities and threats, and on the estimation of the potential of the Tunisian olive oil production and exportation to the European market during the next 5 and 10 years, under scenarios of partial and total liberalization of exchanges between the EU and Third countries.

The rest of this report consists in two parts. The first one will introduce the two methods used, and the process of their use in this research. The second will expose the results of the Delphi research carried out in two rounds next to 24 experts assuring different functions at the level of olive oil sector in Tunisia.

Methodology:

- 1. The SWOT method**
- 2. The DELPHI method**

The simultaneous use of the Delphi and the SWOT methods in this research guarantees certain degree of objectivity in the identification of the four components of the SWOT, and in the estimation of the potential of the Tunisian olive oil production and exportation to the European market during the next 5 and 10 years.

1. The SWOT Method (Strengths, Weaknesses, Opportunities and Threats)

This method has been set up by E. P. Learned, C. R. Christensens, K.R Andrew and W.DS. Guth (LCAG) in the sixties, in Harvard School (10). It constituted the basis philosophy of the classical approach to the enterprise strategy centered on the adaptation of the enterprise to its environment. For this first stream of developing the strategic adaptation, the conception of a strategy consists in finding the best possible reconciliation between strengths and internal weaknesses and threats and external opportunities (11).

This approach, relatively simple, has been enriched by H.I. Ansoff of the Carnegie School who has proposed a similar inspiration model, but with a more elaborate architecture (10). Later, it witnessed three major stages of development. The first introduced the notion of change to palliate the static character of the SWOT and to simulate reflection about the future. The second capitalized on the segmentation in the survey of strengths, weaknesses, opportunities and threats. The third developed the idea of assessing the four components of the SWOT in relation to competitors.

The SWOT method dominated the strategic process in the 70s (11), yet it is actually present and constitutes a universal device helpful in decision making. It has the advantage of being relatively simple and very common because it is easy to use. When it is correctly used, it can provide a strong basis for the formulation of an adequate strategy (12). It permits to collect, organize, evaluate and synthesize objectively a large number of information concerning any organization (internal diagnosis) and its environment (external diagnosis) in order to identify the main strengths, weaknesses, opportunities and threats and to assure the reconciliation between the strategic capacity of this organization and the key factors of success of its environment (13). The four components of the SWOT are classified (14) and synthesized in a matrix permitting the identification of four strategic alternatives (15).

- Offensive strategies (excellence setting) that exploit the organization strengths to profit from the opportunities of its environment.

- Defensive strategies (insurance factors) that use the organization strengths to avoid the threats of its environment.
- Reinforcing strategies (areas that make improvement difficult) that endeavour to improve the organization weaknesses to profit from the opportunities of its environment.
- Repositioning and diversification strategies (critical aspects) that consist in minimizing the organization weaknesses to make it less vulnerable to exterior threats.

The application of the SWOT can meet certain difficulties that should be identified and avoided. The SWOT analysis doesn't produce a strategy but brings about ideas germane to the conception of this strategy. The assessment of the four components of the SWOT may be subjective. One factor may be at a time an opportunity and a threat depending on the perspective of analysis, and according to the capacity of the sector to capitalize on its strengths or to compensate for its weaknesses. By the same token, the momentousness of strengths and weaknesses varies according to the envisaged strategy and to the approached evolution of environment.

The different components of the SWOT analysis, far from being autonomous, are most often interdependent. The classification of strengths, weaknesses, opportunities and threats must be made with special care. It should allow for the concentration on real determinant factors.

2. The DELPHI method

The Delphi method has been developed by the Rand Corporation in Santa Monica, California in the 50's (16). The objective was to develop a technique to get the most reliable consensus of an expert group (17,18), while using a systemic process including several stages to collect opinions (19). This consensus is obtained by interrogating individually, anonymously, and iteratively each expert with the help of a questionnaire written by the promoter on the basis of a preliminary synthesis of literature (20).

The use of this method has quickly spread, geographically and thematically, in particular in domains of technological forecasting and assessing complex social problems (21) with a variety of interpretations and methodological modifications (22). It has become a popular prospecting device of medium and long term and of help to

the decision in domains characterized by a big uncertainty and by a lack of empirical evidence (quantitative projection of present tendencies that are inadequate) (21, 23, 24). The Delphi method exists in two forms; the first is conventional and the second is known under the name "Delphi Conference" (25).

For this work we have chosen the conventional form. Experts chosen among actors of the studied domain, receive in anonymous way a questionnaire form whose object is to collect their opinions on one or several questions. The responsible of the investigation analyzes experts answers, elaborate and distribute a new questionnaire form near the same experts. This recurrent process including several tours allows experts to reevaluate their own answers in relation to the group answers. This process ends when the consensus is reached.

With regard to the other methods of group consensus, the "conventional Delphi" method has the advantage of avoiding the phenomenon of group dynamics and undesirable psychological effects among participants (inhibition, dominant personalities, etc...) (20, 21, 22). This method has also the advantage of being possibly used in combination with other methods (16). In spite of all adaptations it has undertaken since its genesis, this method maintained its fundamental principles which are the following:

- * Respondents are experts: The foundation of this method rests on the hypothesis that expertise constitutes a source of reliable information (26). The expert is chosen for his ability to envisage the future. It is about a person having a good practical, political, legal or administrative knowledge of the problematic, and having enough legitimacy to express a representative opinion of the actors' group to which he belongs. Representativeness of the experts' panel is centered on their quality and not their number (22). The number of experts is so variable depending on the field of study and the problematic treated. The literature recommends a panel of 10 to 18 experts (17).

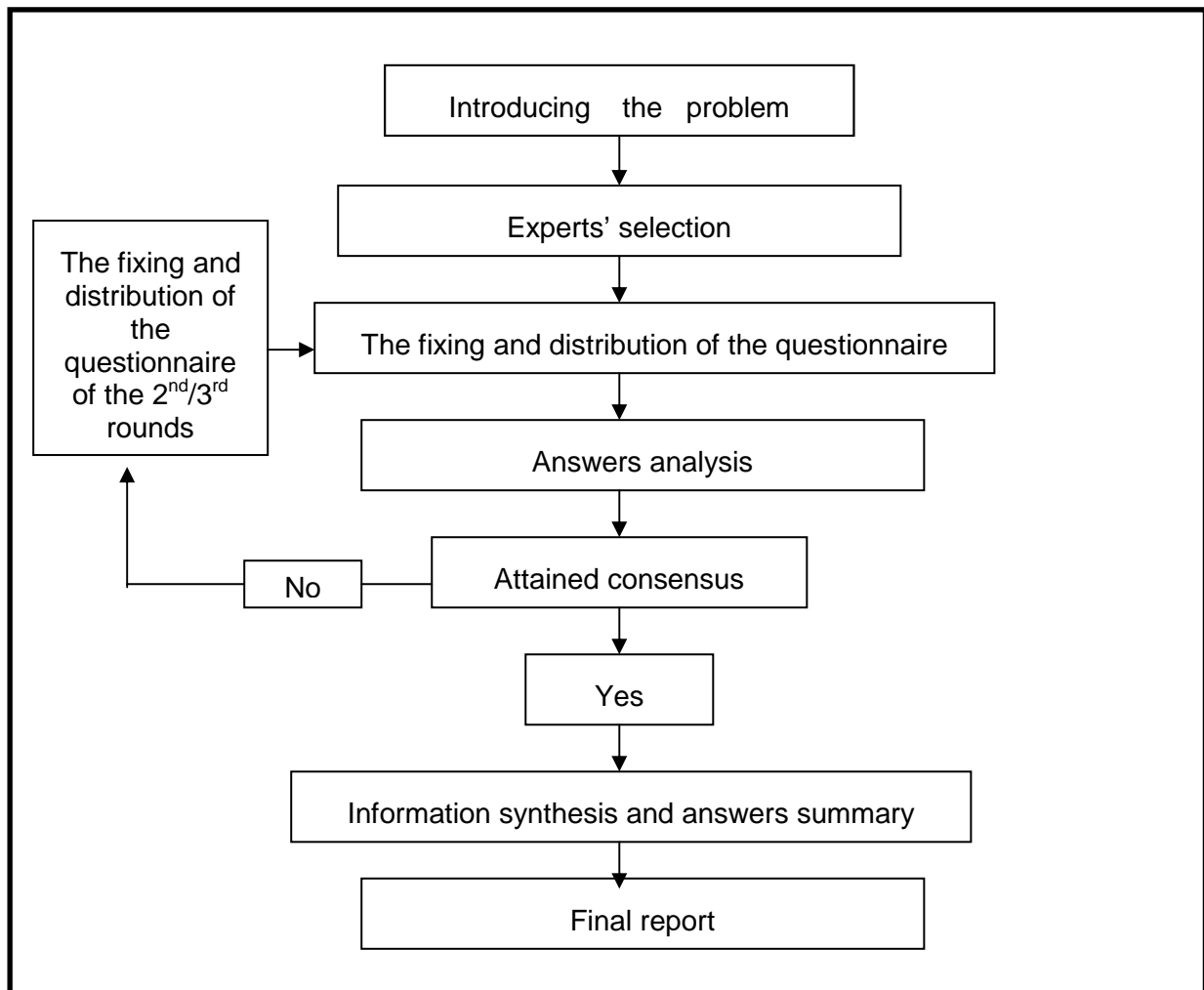
- * Respondents remain anonymous one to the other, but not to the research promoter. This allows him to ask for clarifications and collect qualitative data (17) near the chosen experts. Respondents' answers are anonymous as well.

- * Operations take place in writing, with the help of successive questionnaires (conventional Delphi).

* We endeavor to attain a consensus.

* We use the iteration and the return of controlled anonymous information.

* We endeavor to come to an agreement while using several stages of questionnaire distribution; every stage starts with a summary of the previous stage findings, and that's why experts are asked to give their observations.



3. The use of the two methods

Taking into consideration the difficulties that may go with the setting up of the SWOT analysis in the case of olive oil sector in Tunisia, which is the object of this research, we have chosen a panel of 24 experts in accordance with the requirements and principles of the DELPHI method, and implicated them in the identification of the principal external and internal factors that will determine the potentials of increasing the production and exportations of olive oil to the European market.

The use of the DELPHI analysis has respected the principles of anonymity for experts and the retroaction of information and statistical group responses on which experts rely to reevaluate their opinion. This analysis is carried out in 4 stages:

3.1 Defining the research problem and objectives

This research questions the principal internal and external factors that will determine the performances of olive oil sector in Tunisia, and also the future development of the production and exportation of the Tunisian olive oil to the European market during the next 5 and 10 years, under scenarios of partial liberalization and total liberalization of European importations originating from third world countries.

The two main objectives sought are following:

- * Identifying and organizing the principal strengths, weaknesses, opportunities and threats that will determine the potential of production and exportation of the Tunisian olive oil to the European market.
- * Estimating the potential of the production and exportation of the Tunisian olive oil to the European market during the next 5 and 10 years under scenarios of partial and total liberalization of exchanges between the EU and Mediterranean Third countries.

3.2 Choice of experts

23 experts have been chosen when the first round of the investigation was launched. They assume different functions in olive oil sector (Table1). During the second round, we have questioned 24 experts (The 23 ones of the first round, and a new expert assuming a function of transformation and exportation).

Those experts have a good policy, legal and administrative knowledge about the problem of this sector, and a proper legitimacy to represent the opinion of the acting group to which they belong.

The heterogeneity of the chosen experts' panel, which is due to the diverse functions they assume in olive oil sector, provides the possibility to have at one's disposal many information, opinions and suggestions relating to the problem dealt with.

Table 1: Composition of the expert's panel of the Delphi investigation

	1 st round			2 ^{sd} round		
	Consulted experts	Returned questionnaires	%	Consulted experts	Returned questionnaires	%
Transformation	1	1	100	1	1	100
Administration (Technical service)	7	6	85,71	7	6	85,71
Research	4	3	75	4	4	100
Export	3	2	66,67	3	2	66,67
Transformation + Export	5	3	60	6	3	50
Production + Transformation + Export	2	2	100	2	2	100
Certification body	1	1	100	1	1	100
Total	23	18	78,26	24	19	79,17

3.3 Preliminary identification of Strengths, Weaknesses, Opportunities and Threats determining the performances of olive oil sector in Tunisia

The synthesis of results of a set of studies carried out since the beginning of the 80s (27, 28, 29, 30) and of relatively recent studies (4, 31, 32).

Allowed us to set a preliminary list comprising 9 strengths, 9 weaknesses relative to the different areas of olive oil sector in Tunisia, and 4 opportunities and 4 threats concerning the world market dynamics and new arrangements for market liberalization (Common Market Organization of olive oil and table olives, WTO negotiations and bilateral and regional agreements).

3.4 Conception and administration of questionnaires and statistical treatment of results

For this research, we have chosen to carry out only a two-round. We have equally planned to hold a synthesis meeting including all experts who took part in the 1st and 2nd rounds, in particular for what concerns the results of the SWOT analysis if consent on the four components of the SWOT is not reached.

The questionnaire of the first round of the inquiry included 15 questions on various themes that are:

- The expert's field of activity (Q1).
- The external factors (Opportunities and Threats) and the internal factors (Strengths and Weaknesses) that will determine the potential of the production and exportation of the Tunisian olive oil to the European market during the next five and ten years (Q2 and Q3). The preliminary list of the identified Strengths, Weaknesses, Opportunities and Threats has been proposed to the chosen experts with a view to fill them and mention the degree of agreement between them.
- Increasing olive oil production during the next five and ten years, and identifying actions that will allow this augmentation in case where Tunisia is confronted by no market constraint (Q4 and Q5).
- The production part that will be exported to the European Union during the next five and ten years (horizon of 2015) under scenarios of partial and total

liberalization of exchanges between the European Union and the Mediterranean Third countries (Q6, Q7, Q8, Q9, Q10, Q12, Q13 and Q14).

The scenario of partial liberalization concerns the quota, the Inward-processing, and the normal regime. It was elaborated on the basis of the new arrangements of the CMO 2004 (Items 11 and 13 of the regulation 865/2004). It seeks to make use of one or all of the following measures:

- * Augmenting the quota that will reach 86 thousand tons with or without increasing the authorized quantities in January, February and March. We recall that the monthly quota is of a thousand ton for January and February, 4 thousand tons for March, 8 thousand tons for April, and 10 thousand tons for each of May and October.

- * Maintaining the regime of Inward- processing

- * Lowering of 20% the tariffs applied to olive oil importations in normal regime. We recall that the actual tariffs amount to 1245 Euros/ton for virgin non-lamp olive oil, 1226 Euros/ton for virgin lamp, and 1346 Euros/ton for refined olive oil.

- The impact of applying item 11 of the regulation n°865/2004 of the CMO on the Tunisian exportations to the European market during the next decade (Q11).
- The impact of the schedule of conditions, which is recently used in Tunisia and fixes the conditions for obtaining the exporter's agreement, on the exportations of the Tunisian olive oil (Q15).

Most of the questions were followed by a square allowing the expert to formulate his comment and justification.

Notice that the first round of the inquiry was launched on the 24th of December 2005 after testing the questionnaire on three people who didn't make part of the chosen experts' panel. Considering the formulated suggestions, the questionnaire of the inquiry witnessed certain modifications in form and content.

The reception of answers started on the 30th of December 2005 and ended on the 20th of February 2006. In total, 18 experts (78% of the panel) filled the questionnaire. Some experts, being very busy, took time to answer. Some others were contacted

over the phone to discuss with them and clarify the answers they proposed. The permanent contact with these experts had a positive effect on the number of participants and quality of the formulated answers. The five experts who didn't participate didn't specify the reasons. They were continually contacted but never coming to convince them to participate. As for the SWOT, certain experts just classified the proposed Strengths, weaknesses, opportunities and threats. Others added other ones. Most of the suggestions formulated by these experts were taken into consideration.

The answers formulated by the 18 experts were taken hold of and gone through. The statistical treatment of these responses was carried out by calculating the median, the first and third quintile for quantitative questions, and the average, the standard deviation and the variation coefficient for qualitative questions.

Taking into consideration the results of the first round, we elaborated a second questionnaire comprising 14 questions. The question Q1, relating to the expert's status, was eliminated. The second round of the inquiry was launched on the 17th of April, 2006, with 23 experts who participated in the first round and a new expert assuring the function of transformation and exportation. This second round allowed experts to know the judgment of the group, and to review their judgments as regards the first round. For qualitative questions, a Likert scale with 5 levels was chosen to measure the degree of agreement between experts.

The reception of answers started on the 25th of April and ended on the 29th of July, 2006. In total, 19 experts (79% of the panel) filled the questionnaire. As in the first round, certain experts, very busy, took time to answer. The five experts who didn't participate didn't specify the reasons. They were continually contacted but without coming to convince them to participate. It is worth to mention that one of the experts who participated in the first round failed to do so in the second round due to his busyness. Another expert didn't participate in the first round, but communicated us his answers during the second round.

For the quantitative questions relating to the estimation of the potential of the production and exportation of the Tunisian olive oil to the European market, certain experts rectified their initial judgments considering the judgment of the group.

Other, however, maintained their judgments and justified them.

The answers formulated by the 19 experts were taken hold of and gone through. The statistical treatment of these answers was carried out by calculating the median, first and third quintile for quantitative questions, and the average standard deviation and the variation coefficient for qualitative questions.

To make sure of the consensus, and estimate the degree of convergence between the two rounds for the quantitative variables, we calculated and compared the absolute average variation by the median.

$$E_{am} = \frac{\left| \sum_i^n X_i - Me \right|}{n} \quad (26)$$

X_i : degree of agreement estimated by the expert j

Me : The median of the variable

n : total number of experts.

If convergence exists, then the calculation of absolute variations by the median tends to be centered.

Results:

- 1. The four components of the SWOT**
- 2. Estimating the potential of the production and exportation of the Tunisian olive oil to the European market during the next 5 and 10 years**

1. Strengths, Weaknesses, Opportunities and Threats (SWOT) determining the performances of olive oil sector in Tunisia

For each strengths, weaknesses, opportunities and threats, we have calculated the average and the variation coefficient of the degree of agreement between experts. We have noticed that consent is attained at the majority of weaknesses and threats. Whereas for certain strengths and opportunities there is no such consent. This seems to be due to the tendency and habit (state of mind) of certain experts to give more importance to the identification of the weaknesses and threats through a strategic and prospective diagnosis. This would be easier than identifying the strengths and opportunities.

The average of the degrees of agreement has helped in the classification of the different strengths, weaknesses, opportunities, and threats, in descending order (from the highest average to the lowest one).

1.1 Strengths

* The emergence of new private operators in the collection, and the commercialization of olive oil (at present, about 93 private exporters). The Tunisian olive oil office (ONH) assured all exportations of the Tunisian olive oil until 1994, from that date the monopoly has been abolished¹, and private exporters has taken place. These new operators contributed on average to 43% of the total exportations between 1995 and 2002. Exportations assured by the private sector ranged between a minimum of 4.57 thousand tons in 1996, and a maximum of 96.78 thousand tons in 1999 (Table 2).

Table 2: Contribution of the private sector to the total exportations of olive oil

Unit: thousand tons

	1995	1996	1997	1998	1999	2000	2001	2002
Total	90,2	29	126	124,1	163,9	113,9	90,3	22,2
ONH	78,3	24,4	65,3	91,6	67,1	42	40,5	13,3
Private	11,9	4,6	60,7	32,5	96,8	71,9	49,8	8,9
Private (%)	13,19	15,86	48,17	26,19	59,06	63,13	55,15	40,09

Source INS and OCT

¹ Law N°94-37 of the 24th of February 1994, modifying the decree-law N°70-13 of the 16th of October 1970 bringing reorganization of the ONH and ratified by the law n°70-53 of the 20th of November 1970.

Since their involvement in the collection and the commercialization of olive oil, these operators have slightly varied the destinations of this product that has taken place on the emerging markets like the USA, Canada, Japan, Russia, Australia, Brazil, Argentina, Saudi Arabia, etc.

Although the quantities exported to these markets remain limited compared to exportations to the European market (outside quota), this orientation necessitates support.

* The emergence of Tunisian producers oriented to the production of quality olive oil and packaged olive oils. Certain oleifactors or exporter-oleifactors have undertaken actions to improve the quality and packaging of olives produced, together with setting and launching Tunisian marks. This new orientation is well sustained by the state within the framework of a national program of total quality supervised by the Industries Promotion Agency, and a program of promotion for packaged olive oil exportations. The quantities of packaged olive oil exported at present are only 1% of the total olive oil exportations (31). Packages used are glass bottles and metallic cans, generally imported. The capacity signaled in Litre or in Kg is of 0.25; 0.50; 0.75 and of 1 litre for the bottles, and of 1 to 5 litres for cans. The main marks exported and/ or sold on the domestic market are Sfax oil, Châal, Zouita, Ruspina, Rivier d'or, Zarzis, Najla, Amilcar, Huilmed, Imex, Taparora, Soleil du sud, Alysa and La Colombe(4).

* The labor force and the mechanical traction are relatively less expensive as compared to European competing countries. For the pruning of olive trees, the daily salary varies between 8 TND (unqualified prune-maker and ordinary agricultural labor force) and 15 TND (qualified prune-maker). It can reach 20 TND in certain regions. (33) For the picking, payment is either per diem, 10 to 12 TND a couple (Man - Woman), or by Kafis (450 Kg of olives) whose price varies between 27 and 37 TND according to pickers, delegations and the production size. In other cases, payment is by a proportion of the product. This proportion is equal to 25% in case of a sizable product, 30 to 35% in case of a modest product, and 40 to 50% in case of a scanty product. For the soil work, charges are calculated on the basis of the renting cost (10 and 12 TND/Ha) for farmers without tractors, and on the basis of fuel and lubricant consumptions, and of amortization and maintenance expenses for farmers using tractors.

* Safeguard control of olive inheritance, through the organization of national treatment campaigns of olive tree against its major devastating pests and this is in collaboration with the Tunisian Olive Oil Office (ONH), the General Management of the Agricultural Production and the Olive Tree Institute.

* Promoting and increasing the value of exportations in package. In an attempt to perfectly achieve this strategic objective, the Tunisian state has authorized private exporters, in 2005, to export organic olive oil and olive oil in bottle under Tunisian mark in the framework of the quota granted to Tunisia² by the European Union. It has also set promotion fund for olive oil in package³. This fund is meant to provide aids to every enterprise or group of enterprises, or every consortium or professional association operating in the field of production of olive oil in package, or of its exportation, except for international trade societies. The state intervenes to support actions of common interest seeking to make Tunisian olive oil known in order to promote its marketing, and to increase the value of its exportations (studies and prospects of markets, campaigns of advertising and marketing in the exportation target markets, distribution of samples and brochures, organizing tasting campaigns, advertising actions targeting tourism sector and its related services, participation in fairs and invitation of different contributors in the sector).

This fund intervenes equally to support specific actions seeking to reinforce the capacities of an enterprise or a group of enterprises, if they ask for, in order to promote their exportations, especially by increasing their value (participation to fairs and shows and markets prospecting; the setting up in foreign countries of structures of commercialization, distribution and marketing; search for intermediaries in the target markets; adaptation of products packaging to the markets demands; purchasing and recording trade marks; setting quality labels; elaborating communication supports to bring to light the enterprise, its activities and its production; referencing of oil in big shops in foreign countries; analysis of packed olive oil in exportation)

² Decree n° 2005-2177 of the 9th of August 2005, Official Journal of the Tunisian Republic, 16th of August, 2005.

³ Decree n° 2006-2095 of the 24th of July 2006, Official Journal of the Tunisian Republic, 4th of August, 2006.

The aid of this fund is granted in the form of allocations that amount to 70% of the cost of actions of common interest, and to 50% of the cost of specific actions, with a ceiling of 70 thousand Dinars per year and per enterprise. These allocations cannot be drawn simultaneously with those granted by the other funds. The management of this fund is confided to a consultative council, with the minister charged with industry, called "Tunisian council of olive oil in package".

* Strategic geographical position of Tunisia (Closeness to Europe which is the first olive oil consumption market). This position facilitates the commercial exchanges between Tunisia and the European Union.

* Huge possibilities to promote the organic olive oil and quality signs (Bio, PDO, PGI, TSG, and mountain signs). The state's will expressed since 1995 to promote the organic agriculture and food products in Tunisia permitted the emergence of organic olives covering currently 76123 thousand hectares certified. For the other signs of quality, notably the Protected Geographical Indication, the schedules of conditions and the regulatory clauses are being in preparation.

* Diversity of the institutional structure and importance of the mechanisms aid of to and supervision of the operators in the sector. In addition to actors of production, transformation, collection, merchandising, and consumption, olive oil sector includes a wide range of institutions representing the State and the profession organization. Though the private parties have been willing to get involved since 1987, the state continues to intervene at the level of the different segments of this sector, through its institutions pertaining to different ministries and assuming various functions. These institutions concern studies and researches, the scheduling, the supervision, the training, the vulgarization, the financing, the encouragement, the promotion, the coordination and the regulation.

* Diversity of olive inheritance in Tunisia (beneficial richness to exploit). This diversity offers potentials of improving plantation productivity and olive oil quality. Olive plantations contain a rich selection of varieties each marking edaphic and climatic features that characterize its implantation zone (34, 35). Among these varieties, we mention chemlali, chetoui, ouslati, gerbou, zalmati, zarazi, barouni and Gafsa chamchali mainly.

* Starting the production of new plantations. Since the 90s, more than 9.2 million oil olive trees have been planted, which corresponds to 55.2 thousand hectares(3). At present, Tunisia has 64.15 million oil olive trees (1666.5 thousand hectares). This stretching allows a progressive increase in the production during the coming years.

* Possibility to promote the irrigated oil olive trees at high density (hyper-intensive production). The improvement of oil olive sale prices during the last years reinforced the profitability of this cultivation, and encouraged some promoters to integrate it in the irrigated culture system, notably in the North and the Middle of Tunisia. Densities of plantations are definitely superior to densities in rainy cultures. They vary between 270 and 1250 trees by hectare.

* History of Tunisia in olive oil production (tradition). The oil olive tree constitutes in most arid and semi-arid regions the main component of culture systems that are developed there. In these regions, the social attachment of farmers to olive trees has its origins in the longevity of this culture that has marked the history of the farming populations, having been the main agricultural activity (monoculture) for several generations. The know-how of farmers is based on inherited traditions of management.

* Importance of the tourism sector in Tunisia. The hotel infrastructures offer the possibility to promote olive oil export. About 6 millions of tourists of different nationalities visit Tunisia annually. The integration of olive oil in the tourism sector can have a considerable effect on the direct sales in short-term, and on its export in long-term (reinforcing its position on the traditional markets, and positioning it on new markets).

Strengths	All experts				
	Disagreement	neither agreement nor disagreement	Agreement	Average	CV
Emergence of new private operators in the collection and the commercialization of olive oil.	0	5	14	4,158	0,201
The emergence of Tunisian producers oriented to the production of quality olive oils and packaged olive oils	1	4	14	4,053	0,225
Relatively less expensive laborforce and mechanic traction compared with European competing countries.	0	6	13	3,947	0,198
Safeguard control of olive inheritance.	3	4	12	3,789	0,324
Promoting and increasing the value of packed exportations.	1	3	15	3,789	0,226
Strategic geographical position of Tunisia (proximity to Europe, first market in olive oil consumption.)	2	5	12	3,778	0,295
Huge possibilities of promoting organic olive oil and quality signs (AB, PDO, PGI, TSG and mountain signs).	2	6	11	3,737	3,737
Policy of encouraging and prompting promoters at the different segments of the sector.	3	4	12	3,684	0,351
Diversity of olive inheritance in Tunisia	3	4	12	3,579	0,34
Starting the production of new plantations.	4	5	10	3,526	0,382
The possibility of promoting oil olive tree in irrigation and at high density.	5	3	11	3,368	0,373
History of Tunisia in olive oil production (tradition).	5	3	11	3,368	0,373
Importance of the tourism sector in Tunisia.	7	1	11	3,211	0,437
Long experience of ONH in exportation matter.	9	5	5	2,632	0,555

1.2. Weaknesses

* The evolving of a speculative spirit for different operators of the sector, with weak effort of markets prospecting, survey and selection, together with a manifest lack in marketing strategies for export and home markets in spite of aid and encouragement efforts made by the State through the two projects of Foreign Markets Access Fund (FAMEX 1 and 2). This behavior, among most exporters, favors short-term strategies and the quest for immediate-profit.

* Alternation of the production and limited plantation productivity due to the drought, and the lack of maintenance, developing and restructuring of olive plantations, notably, senescent one (Fig1). In spite of its adaptability to most difficult edaphic and climatic conditions, the olive tree is a genetically alternating crop.

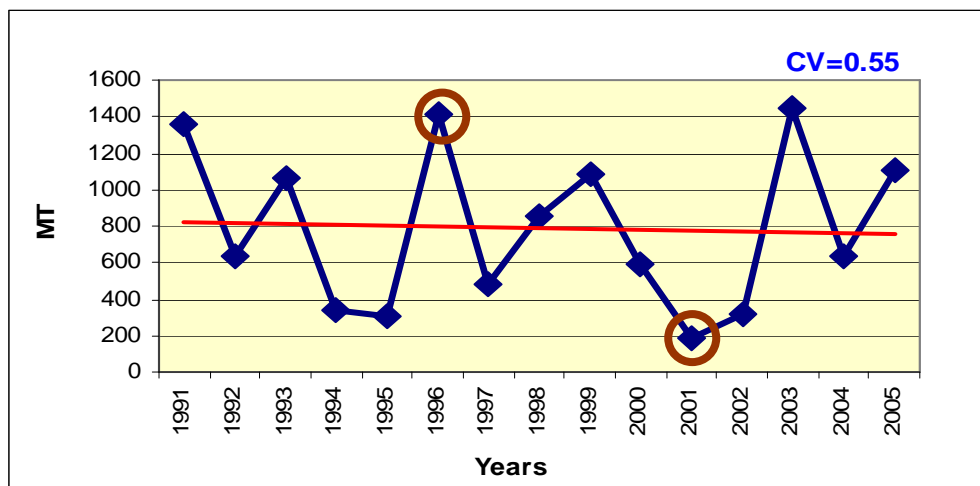


Fig1: Evolution of Olives Production in Tunisia (1991-2005)

This phenomenon is further aggravated in the arid and semi-arid regions due to the lack and unevenness of rains (torrential rains or successful dry years), and the bad quality of soils reserved to this crop, in marginal zones lacking potentials or containing some damaged and un-conserved lands.

The fluctuations of the olive product affect the productivity, the production cost, the income and accounts balance, and result in an inability to reiterate this activity.

* Absence of long-term development strategy for the sector.

* Concentration of the Tunisian olive oil exports in the European Union. About 87% of Tunisian olive oil exports are directed to the European market, namely, Italy and Spain (Fig2).

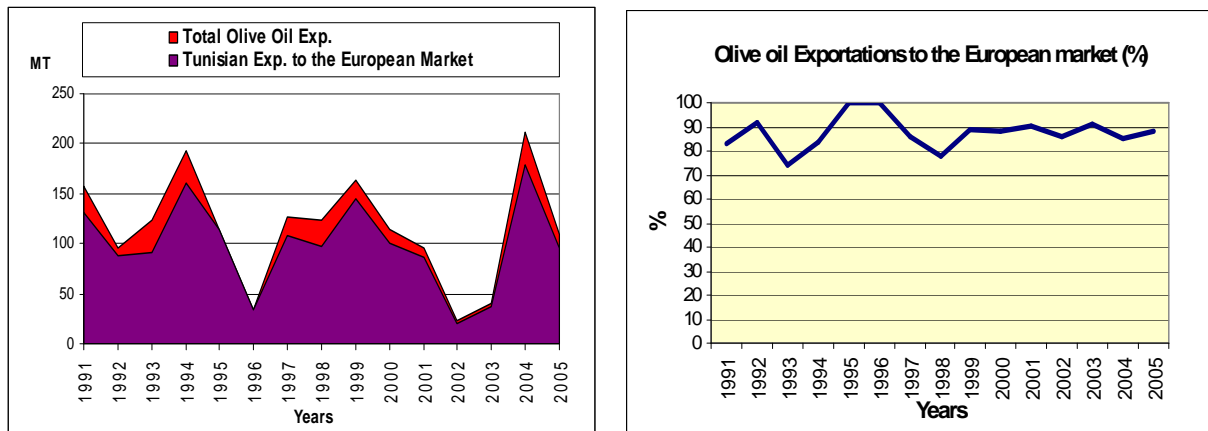


Fig2: Evolution of Tunisian olive oil exportations on the European market (1991-2005)

* Absence of horizontal and vertical integration between the different areas of the sector, which doesn't favor the engagement in a total quality program, and limits the possibilities to reduce olive oil production cost.

* Absence of reserve stocks in olive oil and mechanisms of encouraging and financing the private storage guaranteeing a minimum level of availabilities in oil that cover the quantitative and qualitative engagements, within the time limit specified by the European market, notably at the time of thin product. For the seasons 2001-02 and 2002-03, the low level of the product affected exports that didn't cover the quota.

* Weak efforts to preserve quality and increase the value of the product (conditioning, geographical indication, appellation of origin etc...) inspite of the engagement in a total quality program. The desire expressed by the majority of industrialists, to immediately make profitable the achieved investments, incites them to exploit to a maximum the material of transformation while granting more importance to quantities of triturated olives than to the quality of oil produced. Instructions of transport and storage of olives (using plastic boxes), maintenance of the material of transformation and storage of olives and olive oil are not generally respected. Such behavior limits possibilities of improving the proportion of high quality oils in the total production, and generates a considerable loss of profit (Fig3).

- * Problems of unavailability, low reliability and lack of creation and circulation of information to all levels of the olive oil sector.
- * Difficulty to make use of research and training acquirements in the sector, which affects the level of operators qualification, and the, effort to break new ground in this sector.
- * Domination of the olive oil market in bulk. About 99% of Tunisian olive oil exports are assured in bulk.
- * Difficulties to access funds that are not generally available, particularly, for olive producers.
- * The small proportion of the surface area of oil olive tree in irrigation is only 2.39% of the total surface (40 thousand Ha out of 1667 thousand Ha).
- * Concentration of about 70% of oil olive trees in the Middle and South of Tunisia where the climatic and edaphic conditions are generally restraining (drought and marginal lands) and considerably limit the possibilities to improve the plantation productivity. These regions contribute for 81% to the national oil olive production. Whereas in the North, where the climatic conditions are distinctly favorable, the oil olive tree is marginalized.
- * Raising olive oil production cost. These last years, the increase of olive oil prices on the one hand, and the enhancement of prices of certain production factors due to the increase of the petrol price on the other hand, generated the raising of the olive oil production cost.

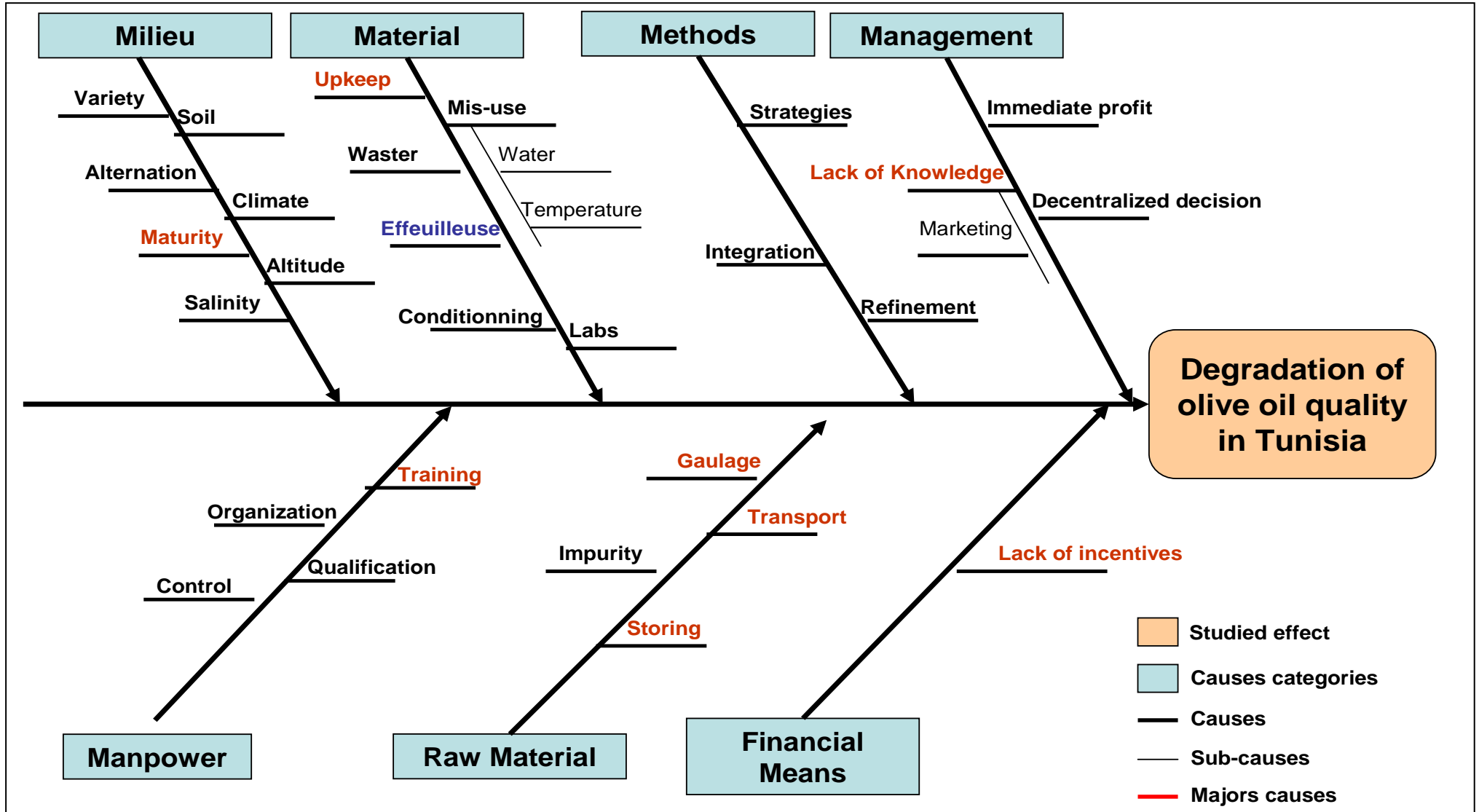


Fig3 : Ishikawa Diagram (36)

Weaknesses	All experts				
	Disagreement	neither agreement nor disagreement	Agreement	Average	CV
Developing a speculative spirit, with weak effort of prospecting, selection and markets study, and manifest lack of marketing strategies.	0	1	17	4,667	0,127
Production alternation, and low plantations productivity due to the drought and to the lack of upkeep, planning, and restructuring olive oil plantations, particularly, senescent ones.	1	2	15	4,444	0,207
Absence of long-term strategy for olive oil sector.	0	2	16	4,444	0,159
Concentration of Tunisian exportations in olive oil on the European Union	0	2	16	4,333	0,158
Absence of horizontal and vertical integrations between the segments of the sector.	1	2	15	4,222	0,208
Absence of reserve stocks in olive oil and of mechanisms for encouraging and financing private storage.	2	3	13	4,056	0,299
Weak efforts to preserve quality and increase the value of the product.	2	2	13	4	0,257
Information problem at all levels of olive oil sector.	3	1	14	4	0,309
Difficulty to make use of research and training acquirements in the sector which affects the qualification level of operators ad innovation effort	1	3	14	3,944	0,253
Predominance of the olive oil market in bulk.	4	2	12	3,778	0,346
Difficulty to access funds which are generally unavailable.	4	4	10	3,389	0,407
Small proportion of the surface area of oil olive tree in irrigation.	6	2	10	3,333	0,483
The concentration of about 70% of olive oil plantations in the arid and semi-arid regions of Tunisia.	6	5	7	3,111	0,492
Raising the production cost of olive oil.	5	7	6	3,056	0,427
The rigidity of the Tunisian regulation concerning olive oil exportation.	6	5	7	3,056	0,442
Raising the exportation cost of olive oil.	8	7	3	2,556	0,45

1.3. Opportunities

* Growth of the European in demand olive oil importation. The European olive oil imports (intra and extra communal) have reached 847.6 thousand tons on average during the period 2001-05, while they were only 472 thousand tons between 1991 and 1995. The imports coming from third countries have reached 139.8 thousand tons during the period 2001-05, while they were 128 thousand tons between 1991 and 1995, and these correspond respectively to 16.5% and 27% of the total imports.

Tunisia has not benefited from this slight increase in the European olive oil imports. The imports coming from Tunisia have gone down to reach 83.3 thousand tons during the period 2001-05, while they were 117 thousand tons between 1991 and 1995. This decrease has resulted in the regression of the Tunisian position on the European market. The European olive oil imports coming from Tunisia have represented 10% of the total imports and 60% of the imports coming from the third countries during the period 2001-05. This contribution was respectively about 25% and 91% during the period 1991-95. The Tunisian market share is only 8.8%. Between 1991 and 1995, this market share was 17.2%.

* Growth in the olive oil import demand of the emergent markets. The import demand of emergent market as USA, Canada, Japan and Australia, that represent the main Italian and Spanish oil destinations, has increased considerably since the beginning of the 90s (table 2). These imports serve to satisfy consumption needs that have not stopped increasing.

For the USA, imports have reached 219.5 thousand tons during the period 2001-05, while they were only 112.3 thousand tons between 1991 and 1995.

Tunisia benefited a little from this increase. Its market share has reached 2.6% on average between 2001 and 2005, while it was 1.8% during the period 1991-95. This market is dominated by the Italian and the Spanish exporters who occupy 68.5% and 17.4% respectively.

Table 3: Evolution of olive oil import in USA, Canada, Japan and Australia

Unit: tone

	USA	Australia	Canada	Japan
1991-95	112326	15519,8	12117,2	5980,8
1996-00	173624,6	22606,8	20322,8	29379,2
2001-05	216165,75	29202,25	25011	30984

Sources FAOSTAT may 2006

* Inward-processing regime free from customs duties. This regime allows European industrialists to import olive oil from the third countries, free from customs duties, but under the condition to export out-side the European Union the equivalent oil quantity (37). In practice, the European industrialists have recourse to this regime when the supply doesn't cover the demand. These imports permit to satisfy the demands of the export markets and to improve competitiveness of European exporters to third countries like the USA, Canada, and Japan.

During the period 1992-00, 65% of the European olive oil imports coming from the third countries were made in inward-processing arrangements. They were done mainly by Italy and Spain that provided about 97% of these imports. Portugal represented only 3%. For these three countries, imports in inward-processing arrangements represented 62%, 80% and 100% of the total imports, respectively (37). 70% of these imports were originally from Tunisia that represents the first supplier. Turkey is the second supplier with 21%, and Morocco is the third with 7%. It is worth to note that the average price of import, in inward-processing arrangements is inferior to the average price in normal regime (37).

This regime offered and offers again to Tunisia export opportunities to the European market. But the modification brought to the CMO in 2004 stipulates, at the level of the article 13 of the regulation 865/2004, that as a necessary measure for the proper functioning of the Common Market organization in olive oil and table olives, it could be decided in accordance with the procedure identified by the article 18, **to totally or partially exclude the recourse to the inward-processing arrangements** (38). This decision may constitute a serious threat to the future of the Tunisian exports to the European market, especially as the Tunisian exports are in large proportion made in this regime.

* Boosting the image of Tunisia as a country producer and exporter of olive oil in the traditional markets, particularly, the European market.

* Tariffs preferences granted to Tunisia. The preferential regime is established under agreements of cooperation and association between the EU and the third countries. Arrangements of this regime differ according to the benefiting countries. For Tunisia, the first agreement of cooperation of 1969, granted to unrefined olive oil a

commercial preference of 5 Euros/tons, and a supplementary reduction of 50 Euros/tons as economic benefit.

The agreement of cooperation of 1976 retained the commercial preference of 5 Euros/tons but modified the amount and the principle of the supplementary reduction of MFN tariff. The deduction applicable to the import of olive oil, other than the one having undergone a process of refinement originally in Tunisia, is calculated in accordance with the article 13 of the basis regulation, reducing 5 Euros/tons and an additional amount equal to the special tax on the exportation of this oil set by Tunisia within the limit of 100 Euros/tons, and is raised by a variable amount fixed by the commission. From 1979, the European commission fixed the commercial preference to 6 Euros/tons and the additional amount to 120.9 Euros/tons. The hiking of this amount remained variable.

In 1986, the application of this deduction system has been limited to a quota. The preferential tariffs and the quantity to which it applies have always been reviewed by the commission according to terms of the European market.

In 1987, the draft treaty of 1976 has been finalized in order to adapt its content to the situation of the European Union market after the joining of Greece, Spain and Portugal. Until the end 1990, Tunisia could export toward the EU 46 thousand tons of unprocessed olive oil under the codes NC 1509 10 10 (virgin lamp olive oil) and NC 1509 10 90 (virgin olive oil and its fractions), from the first of March of every season⁴. This quota is submitted to particular deduction equal to the difference between the ceiling price and the price in the frontier. This price is fixed by the community while taking in to account the price guaranteed by Tunisia to its producers, and the expenses of oil transported to the CAF instead of passing through the community. This regime, that had to come to a close by the end of 1990, has been extended to the end of 1994⁵.

The association agreement made in 1995, maintained the quota of export towards the EU which assures 46 thousand tons of unrefined olive oil, and which has the benefit of a preferential deduction of 78,1 Euros/tons. This agreement, which normally comes to an end in 1999, has been extended to the 31st of December,

⁴ The calendar of monthly exportations in the framework of the quota was subject to many modifications.

⁵ The council decision of the 25th of February, 1991, 91/105/CEE.

2000, date to which the new negotiations raised the quota to 50 thousand tons, and cancelled deduction. Since the 1st of January, 2002, the quota has been increasing every year of 1500 tons during a period of 4 years, and has reached an annual quantity of 56 thousand tons, since the first January, 2005. The last modification of the monthly distribution of this quota fixed the quantity authorized to 1000 tons for January and February, 4000 tons for March, 8000 tons for April, and 10000 tons for May to October.

In 2005, the regulation (EEC) n°1721 modifying the regulation 312/2001, carrying modes of application for olive oil import coming from Tunisia, and departing from certain arrangements of the regulations 1476/95 and 1291/2000, has increased the quotas granted to Tunisia of 700 tons from the 1st of May, 2004 and 467 tons in 2005 (39). This increase is a consequence of the joining of the Czech Republic, Estonia, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Slovenia and Slovakia to the European Union.

* Difficulty of supplying European packers due to the cartel position of the Spanish production cooperatives.

Opportunities	All experts				
	Disagreement	neither agreement nor disagreement	Agreement	Average	CV
Increase in the European demand of olive oil importation.	1	3	15	4,316	0,219
Increase in the demand of olive oil on the emergent markets such as the USA, Australia, Canada and Japan.	1	1	17	4,263	0,189
Inward- processing regime free from customs duties.	3	4	12	3,737	0,378
Improving the image of Tunisia as a country producer and exporter of olive oil in the traditional markets (European Union)	3	4	12	3,632	0,346
Preferential regime (Quota of 57.167 thousand tons free from customs duties)	3	5	11	3,526	0,346
Difficulty to supply European packers because of the cartel position of Spanish production cooperatives.	4	9	6	3,158	0,321

1.4. Threats

* The emergence of new producing and exporting countries of olive oil, benefiting from certain tariffs preferences on the European market, within the framework of association agreements (quota with no MFN tariffs). The quotas of olive oil granted to third countries, other than Tunisia, are distributed as follows: Morocco (3.5 thousand tons) (40), Algeria (2 thousand tons) (41), Palestine (2 thousand tons with an increase of 500 tons per year) (42), Lebanon (1000 tons) (43), Jordan (2000 tons in 2006 that will move to 12000 tons from 2010) (44), and possibly Syria that recorded a considerable growth in its production amounting to 183 thousand tons in 2003, while it was only 94,4 thousand tons in 1990. (Negotiations in progress) (Table 4).

The programs of oil olive plantation in which are engaged emergent countries as the USA, Australia, Japan, Argentina, Chilly and other countries will generate an increase in availabilities in olive oil in these countries. For the future, these availabilities will cover their consumption needs, and will clear the exportable surpluses that could compete with traditional exporter countries.

* Production aids granted to producers of the member countries of the European Union. The regulation EC n° 1638/98 of July 20, 1998 adopted for the transitional period 1998-2001, upheld immediate aid to the common productions. The amount of this aid is no more calculated as the difference between the production price and the representative price of the market, but rather fixed to 1322.5 Euros/ton of olive oil for a Guaranteed National Quantity (QNG) of 1777261⁶ tons (760027 tons for Spain, 543164 tons for Italy, 419529 tons for Greece, 51244 tons for Portugal and 3297 tons for France). This measure has, in fact, raised of 31, 6% the maximal quantity guaranteed, but lowered of 5% the amount of aids.

⁶ This quantity attained 1783811 with new quotas granted to Cyprus (6000 tons), Sloveny (400 tons), and Malta (150 tons).

Table 4 : Olive Oil Quota granted to Third Countries

Third Countries	Code NC	Designation	Quota (Ton)	Date of Application
Lebanon	150910	Unrefined olive oil wholly obtained in Lebanon and directly transported to the Community	1000	March 2003
	15100010			
Palestine	150910	Virgin olive oil	2000	January 2005
Tunisia	15091010	Unrefined olive oil wholly obtained in Tunisia and directly transported to the Community	57165	May 2004
	15091090			
Algeria	1509	Olive oil and its fractions even refined but non-chemically modified : lamp virgin (15091010), others (15091090) and other than virgin (1509900)	1000	October 2005
	1510	Other oils and their fractions exclusively obtained from even refined but non-chemically modified olives and mixtures of these oils, or fractions with oils, or fractions of n°1508 : unrefined oils (15100010) and others (15100090)	1000	
Morocco	1509	Olive oil and its fractions even refined but non-chemically modified.	3500	September 2005
	151000	Other oils and their fractions exclusively obtained from even refined but non-chemically modified olives and mixtures of these oils , or fractions with oils, or fractions of n°1508		
Turkey*				In progress
Syria				In progress
Jordan	150910	Unrefined olive oil wholly obtained in Jordan, and directly transported to the Community	2000	From 1 ^{er} January to 31 December 2006
	150910		4500	From 1 ^{er} January to 31 December 2007
	150910		7000	From 1 ^{er} January to 31 December 2008
	150910		9500	From 1 ^{er} January to 31 December 2009
	150910		12000	From 1 ^{er} January to 31 December 2010

* Current regulation: tariff reduction on olive oil importations of this country

Source: European Commission (association agreement)

We note, furthermore, that after the 1st of November, 2001, production aids can only benefit from oils stemming from olive trees planted before the 1st of May, 1998, except for special case anticipated by the regulation. The goal is to limit to a maximum the speculative plantations that caused the instability of the olive oil market.

We should know that a percentage of production aids (1,4%) is kept to be regionally allotted to the financing of shares, aiming at improving the quality of oil production and its impact on the environment. 0,8% are also kept and assigned to organizations of recognized producers, and to their unions to compensate for the expenses due to responsibilities of management and control that they assume. The inclusive aid granted to the small producers (500 Kg) has been cancelled.

In 2001, the commission has decided to put back the application of arrangements of this regulation during the seasons 2001/02, 2002/03 and 2003/04 (Regulation n°1513/2001/CEE). These arrangements permitted some improvement in the common organization market of olive oil, but information and experiences acquired during the transitional period, didn't allow the commission to draw well-founded and definitive conclusions, and propose a reform for the current regulation.

The commission has equally decided that from the 1st of November, the regime of production aids only concern the olive trees put down in a GIS whose completion has been certified. It has moreover reinforced mechanisms of olive and olive oil quality management, by the adjustment of appellations and definitions, and by the creation of a regime of encouragement of operators' organizations accepted in the realization of programs of improvement and attestation of the quality, as well as in the managing of the sector and the olive oil market.

Recently, the European commission has decided to insert **production aids in the single payment to the farm topping 60% (100% for farmers having a surface area inferior to 0,3 hectares)** of the amount received during a definite reference period with regard to seasons 2000/2001, 2001/2002 and 2002/2003 (38, 45).

In order to avoid the abandonment of olive groves, **40% of payments to olive oil during the reference period will be assigned to member States in the form of a national allocation** (table 5). This budgetary allocation will be devoted to the granting of aids to the olive grove, by hectare or by tree, not related to the production,

and intended to maintain olive trees, and to preserve soils and environment, while taking into consideration the local traditions. It will be the member States' concern to designate zones on the basis of a framework to be set up by the European Commission, while respecting a maximum of five categories of olive groves to be granted aids according to their environmental and social value.

Zones of olive groves planted after the 1st of May, 1998, except those included in the new plantation plans approved by the European commission, will be excluded from the single payment regime by farm and by olive grove.

The single payment and the aids for the maintenance of olive groves having environmental and social value are applicable from the 1st of January, 2006.

Table 5: Distribution of the budget allocation according to member countries

Countries	Budget Allocation (Millions Euros)
Spain	412,45
Italy	272,05
Greece	208,14
Portugal	22,66
Cyprus	2,93
France	2,1
Slovenia	0,17
Malta	0,07

Source: European Commission, 2003

* Adoption of quality and merchandising standards (Traceability, labelling, packing etc....) which are more and more restraining. Appellations and definitions, actually in force, are those kept in the framework of the EC regulation n° 865/2004 modifying regulations n°1513/2001, n°1638/98, n°356/92 and n° 136/66/EEC.

The qualitative standards of every appellation, as well as methods of analysis are fixed by the EC regulation n°1989/03 modifying regulations n°796/02, n°2042/01, n°2568/91 and n°2658/87.

Standards of olive oil merchandising are the subject of the regulation n°1750/04 modifying the regulation n°1019/02. They concern the conditioning, the labelling, the presentation and the advertisement for the marketing in the European Union.

In addition to these appellations and definitions fixed by the European Union, we stress the presence of IOOC and Codex Alimentarius standards. An agreement

made at a technical level, between these institutions, had to lead to the harmonization of these standards in 2003. This agreement is not yet set.

* Importance of the MFN tariffs applied to the European olive oil imports coming from third countries in normal regime. This MFN tariffs are fixed by items 13 and 14 of the basis regulation n° 136/66/EEC. This regime witnessed a deep modification within the frame work of the agricultural agreements of Uruguay round. The variable tariffs have been replaced by the equivalent tariffs subjected to discount of 20%. These equivalent tariffs correspond to the difference between the price of entrance through the frontier and the medium world prices, for the period 1986-88. This difference has been assessed to 1556 Euros/tons for the virgin non-lamp olive oil, to 1532 Euros/tons for virgin lamp olive oil, and to 1682 Euros/tons for the refined olive oil during the year 1995.

The tariffs, coming into force at present, amount to 1245, 1226 and 1346 Euros/ton respectively (table 6). Note, however, that the clause specifying expected safeguard, regarding this matter, authorizes taxation of an additional deduction in the of alert price (46).

Table 6: Equivalent Tariff and Alert Price for Olive Oil

Unit: Euros/ton

Olive oil	Equivalent Tariff 1995	Equivalent Tariff 2000	Alert Price
Virgin lamp	1532	1226	1361
Virgin non- lamp	1556	1245	1682
Refined	1682	1346	1101

Source: European commission

The modification brought to the CMO, in 2004, stipulates, in the article 11 of the regulation 865/2004, that if the market price of olive oil in the community exceeds of 1.6 times the prices listed in the item 6 (Table7), during a period of at least three months, it may be decided, in order to assure an appropriate supply in olive oil for the common market through imports from non-member countries, in accordance with the procedure aimed at by the item 18 of the same regulation (38):

- To suspend totally or partially the application of MFN tariffs to olive oil and define modes of such suspension.
- To open up for olive oil an importation quota, to which apply common reduced MFN tariff, and define modes of management of this quota.

Table 7: Intervention Price for the Storage and the Olive Oil Importation

Olive oil	Storage price (Euros/ton) (article 6)	Common market price (Euros/ton)
Extra virgin	1779	2846,4
Virgin	1710	2736
Lamp	1524	2438,4

Source: EC Regulation n°865/2004

The application of these measures appears difficult to us. The European operators have the possibility to act on the price of olive oil, and avoid exceeding to the level fixed by the item 11, within a period of at least 3 months. But in case where these measures are put into action, they could encourage exports of third countries to the European market.

It offers new opportunities of export to Tunisia, but negatively affects the preferential advantages that are granted to it, and reinforces the competition of the other third-supplier's countries. Tunisia is then invited to reinforce its price and structural competitiveness with regard to potential competitors in order to save its interests.

Threats	All experts				
	Disagreement	neither agreement nor disagreement	Agreement	Average	CV
The emergence of new countries producers and exporters of olive who can benefit from certain tariff preferences on the European market.	1	1	17	4,316	0,19
Aid to production granted to European producers.	2	2	15	4,053	0,313
Adoption of norms of quality and commercialization (traceability, labeling, packing, etc....) more and more restraining.	4	3	12	3,632	0,37
The importance of the deductions applied to olive oil importations originating from Third countries in normal regime.	5	3	11	3,474	0,422

2. Estimating the potential of the production and exportation of the Tunisian olive oil to the European market during the next 5 and 10 years

2.1. Estimating the production of the Tunisian olive oil during the next 5 and 10 years

According to the questioned experts, olive oil production will attain 190 thousand tons during the period 2006-10, and 250 thousand tons during the period 2011-15 (table 8). Compared with the period 2001-05 during which olive oil production was of 142 thousand tons, the relative increase will be of 33.8 and 76% respectively.

The production increase will be possible thanks to certain actions to be made and which are classified according to the level of agreement between experts as follows:

- Increasing plantation's yields through the application of good agricultural practices ($\bar{z} = 4.53$; $Cv = 0.135$)
- An integrated olive growing strategy strongly based on scientific arguments, clear objectives, and mobilizing adequate human and material means ($\bar{z} = 4.53$; $CV = 0.135$).
- Extending areas of oil olives in irrigation ($\bar{z} = 4.21$; $CV = 0.218$)
- Reinforcing financial availabilities for the benefit of the sector, and granting direct aid to producers ($\bar{z} = 4.05$; $CV = 0.279$).
- Regenerating old plantations through uprooting and replanting while reconsidering densities ($\bar{z} = 3.95$; $CV = 0.298$)
- Extending areas of oil olives in dry with a verification of plantations densities ($\bar{z} = 3.74$; $CV = 0.280$)
- Promoting hyper-intensive plantations ($\bar{z} = 3.62$; $CV = 0.392$)
- Encouraging the selection of Tunisian varieties in intensive plantations ($\bar{z} = 3.32$; $CV = 0.285$).

Table 8: Estimating the production of the Tunisian olive oil during the next 5 and 10 years

	1 st round			2 nd round			1 st round E _{am}	2 nd round E _{am}
	Median	Quartile1	Quartile3	Median	Quartile1	Quartile3		
2006-2010	190	178	225	190	180	200	17.6	13.79
2011-2015	250	210	290	250	215	250	24.5	15.4

Source: investigation + our calculation

2.2. Estimating exportations of the Tunisian olive oil to the European market during the next 5 and 10 years

The estimation of the increase in Tunisian exportations to the European market has been carried out for a **scenario of partial liberalization** and a **scenario of total liberalization** of exchanges in olive oil between the European Union and the Mediterranean third countries.

2.2.1. Scenarios of partial liberalization

Partial liberalization has distinguished the three regimes of European importation of olive oil originating from Tunisia (The quota and the Inward- processing regimes which are the most frequently used by Tunisian exporters, and the normal regime bearing all the NPF tariffs which is practically not used by these operators).

Hypotheses of partial liberalization, concerning these three regimes, have been elaborated relying on the regulatory arrangements by the items 11 and 13 of the EC regulation n° 865/2004 (CMO 2004). We recall that these arrangements are the following:

- **Opening up to olive oil an importation quota to which apply common reduced customs duties and defining modes of managing this quota.** During the commercialization season 2005-06, the community's production of olive oil was low. This engendered difficulties in supplying this product. In order to overcome this problem the committee has authorized, from the 1st of May, 2006 and departing from the (EC) regulation n° 312/2001, the issuance of certificates without monthly limitation for the importations originating from Tunisia which are carried out within the context of the quota. For this research, we have expected the raising of the quota that will attain 86 thousand tons with or without increasing the quantities authorized in January, February and March.
- **Total or partial exclusion of the recourse to inward-processing regime**
- **Total a partial suspension of the application to olive oil of common customs duties and definition of modes of suspension.** We have expected a reduction of 20% of the tariffs applied to importations in normal regime. We have remained in the same proportion applied in 1995 within the framework of the agreements of the World Trade Organization (WTO)

- **Estimation of exportations in the framework of a quota** (86 thousand tons with and without modification of the quantities authorized during January, February and March).

If the quota is fixed to 86 thousand tons without modifying its monthly distribution, then Tunisian exportations in olive oil to the European market carried out under this regime will attain 79 thousand tons in bulk, and 4 thousand tons in package during the period 2006-10, and 76 thousand tons in bulk and 8 thousand tons in package during the period 2011-2015 (tables 9 and 10).

In case where the quantities authorized for January, February and March increase Tunisian olive oil exportations to the European market in the context of a quota will attain 80 thousand tons in bulk and 5 thousand tons in package during the period 2006-10, and 76 thousand tons in bulk and 8 thousand tons in package during the period 2011-2015 (tables 11 and 12). We notice that reconsidering the monthly quantities authorized does not have noticeable effect on the Tunisian olive oil exportations in the context of the quota. On the contrary, increasing the quota will have certain effects.

*** Estimation of exportations within the framework of the inward-processing regime.**

Maintaining the regime of inward-processing regime will enable Tunisia to export to the European market 100 thousand tons of olive oil during the period 2006-11 and 130 thousand tons during the period 2011-2015 (table 13). In case where the European committee decides to cancel this regime, the Tunisian exportations to the European market will go down of 50% (table 14).

*** Estimation of exportations in normal regime with a reduction of 20% of the tariffs applied to the European importations in olive oil originating from third countries.**

The normal regime is practically not used due to the high tariffs applied to it. Experts estimate that exportations under this regime will attain 10 thousand tons in bulk and 2 thousand tons in package during the period 2006-10, and 13 thousand tons in bulk and 5 thousand tons in package during the period 2011-2015 (tables 15 and 16).

Apart from this, experts have been questioned on the possible effects of applying item 11 of the regulation 865/2004 of the CMO on the Tunisian exportations to the

European market. 58% of the experts reckon the effect to be positive. 26% of the experts rather reckon the effect to be negative. The other experts confirm that the application of the item 11 will have no effects on the Tunisian exportations.

Alternatives of partial liberalization of the European importations in olive oil originating from Tunisia are classified according to the level of agreement between experts as follows:

- Increasing the quota and increasing monthly quantities in January, February and March ($\bar{z} = 4.27$; CV = 0.39).
- Reducing the tariffs applied to importations in normal regime ($\bar{z} = 3.88$; CV = 0.37)
- Preserving the inward-processing regime ($\bar{z} = 3.77$; CV = 0.42)
- Raising the quota without modifying its monthly distribution ($\bar{z} = 3.71$; CV = 0.36).

If all these alternatives of partial liberalization are applied simultaneously, then the Tunisian exportations to the European market will attain 180 thousand tons in bulk and 6 thousand tons in package during the period 2006-10, and 211 thousand tons in bulk and 13 thousand tons in package during the period 2011-15 (tables 17 and 18).

According to these results, Tunisia is capable of increasing twofold its exportations on the European market during the next 5 and 10 years in case of partial liberalization of exchanges. We recall that these exportations were of 83.3 thousand tons during the period 2001-05, and of 97 thousand tons during the period 1996-00.

**Table9: Estimation of olive oil exportations in bulk in the context of quota during the next 5 and 10 years
(Increasing the quota without modifying its monthly distribution)**

	1 st round			2 nd round			1 st round E _{am}	2 nd round E _{am}
	Median	Quartile1	Quartile3	Median	Quartile1	Quartile3		
2006-2010	74	64	82	79	72	81	1,97	3.6
2011-2015	76	69	80	76	75	80	2,12	0.5

Source: investigation + our calculation

**Table10: Estimation of olive oil exportations in package in the context of quota during the next 5 and 10 years
(Increasing the quota without modifying its monthly distribution)**

	1 st round			2 nd round			1 st round E _{am}	2 nd round E _{am}
	Median	Quartile1	Quartile3	Median	Quartile1	Quartile3		
2006-2010	4	2	5	4	3	5	0	0,05
2011-2015	8	5	10	8	5	10	1	0,26

Source: investigation + our calculation

**Table 11: Estimation of olive oil exportations in bulk in the context of quota during the next 5 and 10 years
(Increasing the quota and modifying its monthly distribution)**

	1 st round			2 nd round			1 st round E _{am}	2 nd round E _{am}
	Median	Quartile1	Quartile3	Median	Quartile1	Quartile3		
2006-2010	71	61	82	80	71	82	0,97	4,45
2011-2015	76	69	80	76	71	80	3,17	0,95

Source: investigation + our calculation

**Table 12: Estimation of olive oil exportations in package in the context of quota during the next 5 and 10 years
(Increasing the quota and modifying its monthly distribution)**

	1 st round			2 nd round			1 st round E _{am}	2 nd round E _{am}
	Median	Quartile1	Quartile3	Median	Quartile1	Quartile3		
2006-2010	5	3	6	5	3	6	1,21	0,45
2011-2015	8	5	15	8	6	10	3,48	0,79

Source: investigation + our calculation

Table 13: Estimation of olive oil exportations in the context of Inward processing during the next 5 and 10 years

	1 st round			2 nd round			1 st round E _{am}	2 nd round E _{am}
	Median	Quartile1	Quartile3	Median	Quartile1	Quartile3		
2006-2010	100	85	111	100	80	112	2,61	1,63
2011-2015	130	100	157	130	110	150	2,88	0,05

Source: investigation + our calculation

Table 14: Estimating the impact of canceling the Inward processing regime on the Tunisian exportations of olive oil to the European market

	1 st round			2 nd round			1 st round E _{am}	2 nd round E _{am}
	Median	Quartile1	Quartile3	Median	Quartile1	Quartile3		
Fall in exportations	50	30	50	50	33	50	4,11	2,6

Source: investigation + our calculation

Table 15: Estimation of olive oil exportations in bulk in the context of normal regime during the next 5 and 10 years

	1 st round			2 nd round			1 st round E _{am}	2 nd round E _{am}
	Median	Quartile1	Quartile3	Median	Quartile1	Quartile3		
2006-2010	10	0	55	10	0	11	16,53	2,42
2011-2015	13	0	63	13	0	14	17,44	3

Source: investigation + our calculation

Table 16: Estimation of olive oil exportations in package in the context of normal regime during the next 5 and 10 years

	1 st round			2 nd round			1 st round E _{am}	2 nd round E _{am}
	Median	Quartile1	Quartile3	Median	Quartile1	Quartile3		
2006-2010	2	0	8	2	0	2	1	0,05
2011-2015	5	0	10	5	0	5	0,59	0,84

Source: investigation + our calculation

**Table 17: Estimation of olive oil exportations in bulk during the next 5 and 10 years
(Partial liberalization of all regimes concerned)**

	1 st round			2 nd round			1 st round E _{am}	2 nd round E _{am}
	Median	Quartile1	Quartile3	Median	Quartile1	Quartile3		
2006-2010	184	167	220	180	164	195	12.04	1.368
2011-2015	226	197	256	211	194	238	4.44	4.579

Source: investigation + our calculation

**Table 18: Estimation of olive oil exportations in package during the next 5 and 10 years
(Partial liberalization of all regimes concerned)**

	1 st round			2 nd round			1 st round E _{am}	2 nd round E _{am}
	Median	Quartile1	Quartile3	Median	Quartile1	Quartile3		
2006-2010	4	3	12	6	4	7	3	0
2011-2015	11	5	18	13	6	18	3.5	1.263

Source: investigation + our calculation

**Table 19: Estimation of the total exportations in olive oil during the next 5 and 10 years
(Partial liberalization of all regimes concerned)**

	1 st round			2 nd round			1 st round E _{am}	2 nd round E _{am}
	Median	Quartile1	Quartile3	Median	Quartile1	Quartile3		
2006-2010	188	170	232	187	170	200	12.04	0.421
2011-2015	246	205	276	223	204	249	4.44	4.579

Source: investigation + our calculation

2.2.2. Scenario of total liberalization

In the case of total liberalization of exchanges between the EU and Tunisia, the Tunisian exportations of olive oil to the European market will attain 148 thousand tons in bulk and 5 thousand in package during the period 2006-2010, and 191 thousand tons in bulk and 15 thousand tons in package during the period 2011-2015 (table 20 and 21). Compared with the period 2001-2005, the relative increase in exportations will be of 83.7 and 147.3% respectively.

The effects of the total liberalization of exchanges on the increase of the Tunisian exportations in olive oil to the European market are inferior to those of partial liberalization. The total liberalization will cause total canceling of the preferences granted by the EU to Tunisia. It will bring about a more important competition between third countries producers and exporters of olive oil (Tunisia, Morocco, Syria, Turkey, Jordan, Algeria, Lebanon and Palestine).

In addition to the estimation of the potential of production and exportation of the Tunisian olive oil to the European market, we have asked the experts to evaluate the impact of the new Tunisian regulation authorizing private operators to export packaged or organic olive oil in the context of a quota on the exportations of these two categories.

According to these experts, the exportations of organic olive oil will attain 4 thousand tons during the period 2006-10, and 8 thousand tons during the period 2011-2015 (table 22). The exportations of packaged olive oil will be of 5 thousand tons during the period 2006-10 and of 8 thousand tons during the period 2011-2015 (table 23).

We have equally questioned these experts on the impact of the schedule of conditions recently used for the exportation of the Tunisian olive oil. 39% of the experts reckon the impact of the schedule of conditions to be positive, 28% rather expect a negative impact, 22% haven't answered this question, and 11% think that the schedule of conditions will have no effect on the exportations.

**Table 20: Estimation of olive oil exportations in bulk during the next 5 and 10 years
(Total liberalization)**

	1 st round			2 nd round			1 st round E _{am}	2 nd round E _{am}
	Median	Quartile1	Quartile3	Median	Quartile1	Quartile3		
2006-2010	148	100	166	148	140	150	3,21	0,63
2011-2015	191	169	212	191	160	196	5,68	2,58

Source: investigation + our calculation

**Table 21: Estimation of olive oil exportations in package during the next 5 and 10 years
(Total liberalization)**

	1 st round			2 nd round			1 st round E _{am}	2 nd round E _{am}
	Median	Quartile1	Quartile3	Median	Quartile1	Quartile3		
2006-2010	5	5	9	5	5	8	1,15	2,26
2011-2015	15	7	16	15	10	15	1,09	0,26

Source: investigation + our calculation

Tableau 22: Estimation of the exportations of organic olive oil during the next 5 and 10 years

	1 st round			2 nd round			1 st round E _{am}	2 nd round E _{am}
	Median	Quartile1	Quartile3	Median	Quartile1	Quartile3		
2006-2010	3	1	5	4	4	5	1.18	0,76
2011-2015	7	2	10	8	8	9	2.74	0,71

Source: investigation + our calculation

Table 23: Estimation of olive oil exportations in package during the next 5 and 10 years

	1 st round			2 nd round			1 st round E _{am}	2 nd round E _{am}
	Median	Quartile1	Quartile3	Median	Quartile1	Quartile3		
2006-2010	5	2	5	5	3	5	1,03	0,74
2011-2015	8	5	10	8	5	8	0,85	0,37

Source: investigation + our calculation

Conclusion

This research provides an overall evaluation of the internal and external factors that determine the performances of olive oil sector in Tunisia, pointing out the major opportunities, threats, strengths and weaknesses (SWOT) that can be present with their actual and future evolution.

The internal diagnosis of this sector has revealed that the system of production and exportation of olive oil in Tunisia shows the following strengths:

- The emergence of new private operators in the collection, and the commercialization of olive oil.
- Emergence of Tunisian producers oriented to the production of quality olive oils, and olive oils in package.
- A relatively less expensive labour and mechanic traction compared with competing European countries.
- Safeguard control of olive inheritance.
- Promoting and increasing the value of packed exportations.
- Strategic geographical location of Tunisia (proximity to Europe, first market in olive oil consumption.)
- Huge possibilities of promoting organic olive oil and quality signs (AB, PDO, PGI, TSG, and mountain signs).
- Policy of encouraging and prompting promoters at the different levels of the sector.
- Diversity of olive inheritance in Tunisia
- Starting the production of new plantations.
- The possibility of promoting oil olive tree in irrigation and at high density.
- History of Tunisia in olive oil production (tradition).
- Importance of the tourism sector in Tunisia.

Despite these strengths, the system shows major weaknesses among which the questioned experts mention:

- Developing a speculative spirit, with weak effort of prospecting, selection and

markets study, and manifest lack of marketing strategies.

- Production alternation, and low plantations productivity due to the drought and the lack of upkeep, planning, and restructuring of olive oil plantations, particularly, senescent ones.
- Absence of long-term strategy for olive oil sector.
- Concentration of Tunisian exportations in olive oil on the European Union.
- Absence of horizontal and vertical integrations between the levels of the sector.
- Absence of reserve stocks in olive oil and of mechanisms for encouraging and financing private storing.
- Weak efforts to maintain quality and to enhance the value of the product
- Information problem at all levels of olive oil sector
- Difficulty to put into practice the acquirements of the research and of the training at the sector which affects the qualification level of operators and innovation effort
- Predominance of olive oil market in bulk.
- Difficulty to access funds which are generally unavailable
- Small proportion of the surface area of olive tree in irrigation.
- The concentration of about 70% of olive oil plantations in the arid and semi-arid regions of Tunisia.
- Raising the production cost of olive oil.

The external diagnosis that has concerned the dynamics of the world market and the policy reforms has emphasized six opportunities.

- Increase in the European demand of olive oil importation.
- Increase in the demand of olive oil on the emergent markets such as the USA, Australia, Canada and Japan.
- Inward-processing regime free from customs duties.
- Improving the image of Tunisia as a country producer and exporter of olive oil

on the traditional markets (European Union)

- Preferential regime (Quota of 57.167 thousand tons free from customs duties)
- Difficulty to supply European packers because of the cartel position of Spanish production cooperatives

Tunisia should seize all her opportunities. She has equally to face the range of threats the most important of which are:

- The emergence of new countries producers and exporters of olive that can benefit from certain tariff preferences on the European market
- Aid to production granted to European producers.
- Adoption of norms of quality and commercialization (traceability, labelling, packing, etc....) more and more restraining.
- The importance of the deductions applied to olive oil importations originating from Third countries in normal regime

All these strengths, weaknesses, opportunities and threats identified by the 24 experts are synthesized at the level of the SWOT matrix presented in the following page.

This research equally provides an estimation of the production and exportations of the Tunisian olive oil to the European market for both scenarios of partial and total liberalization of exchanges between the EU and the mediterranean third countries. This estimation is realised in a two-round investigation on a sample of 24 experts assuring different functions in olive oil sector in Tunisia.

Olive oil production will attain 190 thousand tons during the period 2006-10 and 250 thousand tons during the period 2011-15 (table 8). The relative increase will be of 33.8 and 76%, respectively, compared with the period 2001-05 during which olive oil production was of 142 thousand tons.

Internal diagnosis	Strengths	Weaknesses
<p>Olive oil production and exportation system in Tunisia</p>	<ul style="list-style-type: none"> * Emergence of new private operators in the collection and commercialization of olive oil * The emergence of Tunisian producers oriented to the production of quality olive oil and packaged olive oils * Relatively less expensive labour and mechanic traction compared with competing European countries * Safeguard control of olive inheritance * Promoting and increasing the value of packed exportations. * Strategic geographical location of Tunisia (proximity to Europe, first market in olive oil consumption.) * Huge possibilities of promoting organic olive oil and quality signs (AB, PDO, PGI, TSG, and mountain signs). * Policy of encouraging and prompting promoters at the different levels of the sector. * Diversity of olive inheritance in Tunisia * Starting the production of new plantations. * The possibility of promoting oil olive tree in irrigation and at high density. * History of Tunisia in olive oil production (tradition). * Importance of the tourism sector in Tunisia. 	<ul style="list-style-type: none"> * Developing a speculative spirit, with weak effort of prospecting, selection and markets study, and manifest lack of marketing strategies * Production alternation and low plantations productivity due to the drought and to the lack of upkeep, planning, and restructuring olive oil plantations, particularly, senescent ones * Absence of long-term strategy for olive oil sector * Concentration of Tunisian exportations in olive oil on the European Union * Absence of horizontal and vertical integrations between the segments of the sector * Absence of reserve stocks in olive oil and of mechanisms for encouraging and financing private storage * Weak efforts to maintain quality and to increase the value of the product * Information problem at all levels of olive oil sector * Difficulty to put into action the acquirements of the research and training at the sector which affects the qualification level of operators and innovation effort * Predominance of oil market in bulk * Difficulty to access funds which are generally unavailable * Small proportion of the surface area of oil olive tree in irrigation. * The concentration of about 70% of olive oil plantations in the arid and semi-arid regions of Tunisia * Raising the production cost of olive oil.

External Diagnosis	Opportunities	Threats
Market Dynamics and Political Reforms	<ul style="list-style-type: none"> * Increase in the European demand of olive oil importation * Increase in the demand of olive oil on the emergent markets such as the USA, Australia, Canada and Japan * Inward--processing regime free from customs duties. * To improve the image of Tunisia as a country producer and exporter of olive oil on the traditional markets (European Union) * Preferential regime (Quota of 57.167 thousand tons free from customs duties) * Difficulty to supply European packers because of the cartel position of Spanish production cooperatives 	<ul style="list-style-type: none"> * The emergence of new countries producers and exporters of olive that can benefit from certain tariff preferences on the European market. * Aid to production granted to European producers. * Adoption of norms of quality and commercialization (traceability, labelling, packing, etc....) more and more restraining. * The importance of the deductions applied to olive oil importations originating from Third countries in normal regime.

In the case of partial liberalization of exchanges between the EU and Tunisia, the Tunisian exportation of olive oil to the European market will attain 180 thousand tons in bulk and 6 thousand tons in package during the period 2006-2010, and 211 thousand tons in bulk and 13 thousand tons in package during the period 2011-15.

The exportations in the context of quota will attain 79 thousand tons in bulk and 4 thousand tons in package during the periode 2006-10, and 76 thousand tons in bulk and 8 thousand tons in package during the period 2011-2015, if this quota is fixed to 86 thousand tons without modification of its monthly distribution.

These exportations will attain 80 thousand tons in bulk and 5 thousand tons in package during the period 2006-10, and 76 thousand tons in bulk and 8 thousand tons in package during the period 2011-2015, if the quantities authorized for January, February and March increase.

Exportations in Inward- processing regime will be of 100 thousand tons of olive oil during the period 2006-10, and of 130 thousand tons during the period 2011-2015.

Exportations in normal regime will be no more than 10 thousand tons in bulk and 2 thousand tons in package during the period 2006-10 and of 13 thousand tons in bulk and 5 thousand tons in package during the period 2011-2015.

In the framework of total liberalization of exchanges between the EU and Tunisia, Tunisian olive oil exportations to the European market will attain 148 thousand tons in bulk and 5 thousand tons in package during the period 2006-2010, and 191 thousand tons in bulk and 15 thousand tons in package during the period 2011-2015.

Total liberalization will cause total canceling of the preferences granted to Tunisia by the European Union, and will bring about a more significant competition between Third countries producers and exporters of olive oil (Tunisia, Morocco, Syria, Turkey, Jordan, Algeria, the Lebanon, and Palestine).

Bibliographic references

(1) Pierre F. GONOD & Jean-Luc GURLER, 2002: *Evolution de la prospective*; OCL Vol.9 N°5; Septembre/Octobre; p 317-328.

(2) Frédéric HESELMANS, Ian MILLES et all, 2003. *Guide pratique pour la prospective régionale en Belgique*. Centre d'Etude de l'Opinion de l'Université de Liège; 193 p.

http://www.socioforesight.net/RegionalForesightGuide_IBelgium_Fr_Fina6rEVISED_Ok.PDF

(3) Ministère de l'Agriculture, Direction Générale des Etudes et du Développement Agricole, Enquêtes sur les structures agricoles 2004-2005 Tunisie 2006.

(4) Boubaker KARRAY, 2002. La filière huile d'olive en Tunisie : performances et stratégies d'adaptation, thèse présentée pour obtenir le grade de Docteur de l'Université Montpellier I, 413 p.

(5) Mahmoud ALLAYA et Boubaker KARRAY, 2000: Avantage comparatif de la production d'olives à huile dans la région de Sfax (Tunisie). In la revue *MEDIT* N° 2, pp 24-29

(6) Ministère du Développement et de la Coopération Internationale Institut National des Statistiques. Enquête Nationale sur le Budget, Consommation et le niveau de vie des ménages, 2000, Volume A.

(7) Boubaker KARRAY, 2004: Le marché européen de l'huile d'olive: Mécanismes de gestion et implications sur la position concurrentielle des pays exportateurs. In revue *NEW MEDIT* N° 2, pp 24-31.

(8) Commission européenne, 2002. Evaluation des impacts des principales mesures de l'OCM Huile d'olive. Rapport final, volume 1. pp 103.

(9) P.K. Srivastava, K. Kulshreshtha, C. S. MOHANTY, P. Pushpangadan, A. Singh. (2005): Stakeholder-based SWOT analysis for successful municipal solid waste management in lucknow, India. *ELSEIVER: Waste Management* 25, p 531-537

(10) Maurice SAI AS, Emmanuel METAIS, (2001). Stratégie d'entreprise : évolution de la pensée. *Finance Contrôle stratégie*, Volume 4, n°1, mars 2001, p183-213.

- (11)** Patrick Perrotton, (2002). Safari en pays stratégie : L'exploration des grands courants de la pensée stratégique. Séminaire : conduite de la recherche en contrôle de gestion. Université de Paris Dauphine ; Fiche de lecture ; p1-30.
- (12)** Hsu-Hsi Chang, Wen-Chin Huang, (2006). Application of a qualification SWOT analytical method: ELSEIVER: Mathematical and computer modelling 43, p 158-169.
- (13)** Gerry JOHNSON, Kevan SCHOLEES et Frédéric Fréry (2002). « Stratégique », 2^{ème} édition. Editeur : Pearson education France. 717p
- (14)** Mikko Kurttila, Mauno Pesonen, Jyrki Kangas, Miika Kajanus, (2000). Utilizing the analytic hierarchy process (AHP) in SWOT analysis – a hybrid method and its application to a forest-certification case. ELSEIVER: Forest Policy and Economics 1. p 41-51.
- (15)** Robert G. Dyson, (2004). Strategic development and SWOT analysis at the University of Warwick., ELSEIVER: European Journal of Operational Research 152 p 631-640.
- (16)** Kerstin Cuhls, Delphi method: United Nations Industrial Development Organization, p 93-112. www.unido.org/file-storage/download?file_id=16959
- (17)** Chitu Okoli, Suzanna D. Pawlowski (2004); The Delphi method as a research tool: an example, design considerations and applications; Information et Management 42; p15-29 Science direct: ELSEVIER.
- (18)** Harold A. Linstone, Murray Turoff (2002); The Delphi Method: Techniques and applications; 34p.
- (19)** Deborah Hennessy et Carolyn Hicks (2001); Les caractéristiques idéales des responsables des soins infirmiers en Europe : Etude Delphi pour le bureau régional de l'OMS pour l'Europe; EUR/01/5019319 ; 20p.
- (20)** SRLF (2005) ; Méthodologie des Recommandations Formalisées d'Experts de la Société de réanimation de Langue Française ; RFE-SRLF ; 17p.
www.srlf.org/Data/Documents/PDF/Referentiels/Revision-CG7-05-2005.pdf
- (21)** Jon Landeta (2005); Current validity of the Delphi method in social sciences; Technological Forecasting & Social change; p1-16 Science direct: ELSEVIER.

- (22)** Catherine Powell (2003); The Delphi technique: myths and realities; Journal of Advanced Nursing 41 (4); p376-382.
- (23)** J.P. Birat (2000); A futures study analysis of the technological evolution of the EAF by 2010; La Revue de Métallurgie-CIT; p1347-1363.
- (24)** Samir Mili & Manuel Rodriguez Zuniga (2001); Exploring future developments in international olive oil trade and marketing: a Spanish perspective; Published in Agribusiness: An international Journal, Vol.17, n°3, 2001, pp.397-415.
- (25)** Nikki SLOCUM, (2003): « Participatory methods toolkit: a practitioner's manual »; United Nations University CRIS; 166p.
- (26)** Henri ISAAC (1996); Evaluation de trois dimensions des activités de services professionnel : utilisation de la méthode Delphi.
- (27)** MINISTERE DE L'AGRICULTURE, Direction Générale de la Production Agricole, 1981. Etude sur les perspectives de développement de l'oléiculture en Tunisie SOGETA, CNEA, 301 p plus annexes.
- (28)** FAO, 1981. Développement rural intégré des zones à vocation oléicole, Tunisie: conclusions et recommandations du projet, rapport terminal AGGCP/TUN/SWE, 127 p.
- (29)** FAO, 1983. Renforcement de l'expérimentation, de la formation et de la diffusion de l'information dans le secteur oléicole, Tunisie - conclusions et recommandations du projet, rapport terminal AG ECE/TUN/501/IRQ, 50 p.
- (30)** FAO, 1984. Etude du sous secteur oléicole, Tunisie - Rapport du programme de coopération FAO /banque mondiale- Centre d'investissement.
- (31)** Ministère de l'Agriculture et des ressources hydrauliques, ACC, 2005 : Réflexion sur la stratégie de promotion des exportations de l'huile d'olive tunisienne, 79 p.
- (32)** Ministère de l'industrie et de l'énergie et des petites et moyennes entreprises, 2000, étude de positionnement stratégique de la branche huilerie, Cahier du CPEI n°4.
- (33)** Boubaker KARRAY, A. LOUIZI, A. SAHNOUN, 2000: Estimation du coût de production d'olives à huile en Tunisie : Application de la méthode de coût constaté aux exploitations privées dans la région de Sfax. In la revue MEDIT N°4.

- (34)** Ahmed TRIGUI, Monji MSALLEM et collaborateurs, 2002. Catalogue des variétés autochtones et types locaux, 159p.
- (35)** N. GRATI KAMMOUN et M. KHLIF, 2001. Caractérisation technologique des variétés d'olivier cultivées en Tunisie, 69 p+Annexes.
- (36)** F. KANOUN, 2006. Conception de fiches guides pour l'estimation des coûts de qualité dans la filière huile d'olive en Tunisie, Mastère Professionnel « Gestion par objectifs » 122p+Annexes.
- (37)** Commission européenne, (2001). Le secteur de l'huile d'olive et des olives de table pp 50.
- (38)** Règlement (CEE) n° 865/2004 du Conseil, du 29 avril 2004, modifiant portant organisation commune des marchés dans le secteur de l'huile d'olive et des olives de table et modifiant le règlement (CEE) n° 827/68. Journal officiel de l'Union européenne n°L 161 du 30/4/2004.
- (39)** Règlement (CEE) n° 1721/2005 du Conseil, du 20 octobre 2005, modifiant le règlement (CEE) n° 312/2001 portant modalités d'application pour l'importation d'huile d'olive originaire de Tunisie et dérogeant à certaines dispositions des règlements (CEE) n° 1476/95 et (CEE) n° 1291/2000. Journal officiel de l'Union européenne n°L 276 du 21/10/2005.
- (40)** Protocole à l'accord euro méditerranéen établissant une association entre la Communauté européenne et ses membres, d'une part, et le Royaume du Maroc, d'autre part, pour tenir compte de l'adhésion à l'Union européenne de la République tchèque, de la République d'Estonie, de la République de Chypre, de la République de Lettonie, de la République de Lituanie, de la République de Hongrie, de la République de Malte, de la République de Pologne, de la République de Slovénie et de la République Slovaque. Journal officiel de l'Union européenne n° JO L 242 du 19/9/2005.
- (41)** Protocole N°1 relatif au régime applicable à l'importation dans la Communauté des produits agricoles originaires d'Algérie. Journal officiel de l'Union européenne n° JO L 265 du 10/10/2005.
- (42)** Accord sous forme d'échange de lettres entre la Communauté européenne et l'Organisation de libéralisation de la Palestine (OLP), agissant pour le compte de

l'Autorité palestinienne de la Cisjordanie et de la bande de Gaza, concernant des mesures de libéralisation réciproques et le remplacement des protocoles n°1 et 2 de l'accord d'association intérimaire CEE- Autorité palestinienne. Journal officiel de l'Union européenne n°L 2 du 5/1/2005.

(43) Règlement (CEE) n° 209/2003 de la Commission, du 3 février 2003, portant modification du règlement (CE) n° 747/2001 du Conseil en ce qui concerne les contingents tarifaires communautaires pour certains produits agricoles originaires du Liban. Journal officiel de l'Union européenne n°L 28 du 4/2/2003.

(44) Accord sous forme d'échange de lettres entre la Communauté européenne et le royaume hachémite de Jordanie concernant les mesures de libéralisation réciproques et modifiant l'accord d'association CE- Jordanie et remplaçant les annexes I, II, III et IV ainsi que les protocoles n° 1 et 2 dudit accord. Journal officiel de l'Union européenne n°L 41 du 13 février 2006.

(45) Règlement (CEE) n° 1782/2003 du Conseil, du 29 septembre 2003, établissant des règles communes pour les régimes de soutien directe dans le cadre de la politique agricole commune et établissant certains régimes de soutien en faveur des agriculteurs et modifiant les règlements (CEE) n° 2019/93, (CEE) n° 1452/2001 (CEE) n°1453/01, (CEE) n°1454/01, (CEE) n°1868/94, (CEE) n°1251/99, (CEE) n° 1254/99, (CEE) n° 1673/00, (CEE) n° 2358/71, (CEE) n° 2529/01. Journal officiel de l'Union européenne n°L 270 du 21/10/03.

(46) http://europa.eu.int/comm/taxation_customs/dds/cgi-bin/tarchap?Lang=FR

APPENDICES

Appendix 1: Estimation of the potential of olive oil production and exportation
(A letter to the selected experters)

We collaborate on a research project entitled "Impact of the liberalization of agricultural and agro food exchanges between the European Union and Mediterranean Third countries". The project activities concern fruits, vegetables and olive oil in the European Union countries, Tunisia, Egypt, Morocco, Turkey and Israel.

For Tunisia, the fifth activity anticipated within the context of this project concerns the estimation on the future increase in olive oil production, and on the proportion of this increase, which will be exported to the European Union within the next 5 and 10 years (horizon of 2015), under different scenarios of common market liberalization.

This work employs the DELPHI method which consists in a recurrent process allowing an anonymous presentation of a set of judgments made by the informants, which will be reevaluated later. It aims at gathering several experts' opinions about a precise subject, highlighting opinion convergences and generating possible consensus.

The application of this method has to respect the principles of experts' anonymity, of retroaction of information, and group statistical responses so that each expert reevaluates his opinions. Therefore we ask your participation to this activity, as one of the key experts in this sector. In the first round of the survey, you answer with much precision to the questions. In the second round, we inform you anonymously about the reaction of the rest of the experts' panel, in order to modify your answers.

Thank you for your help. We rely on your participation to the first and second rounds of the survey.

Sincerely yours.

Dr. Boubaker KARRAY

Olive Tree Institute, PB 256, 3000 Sfax

Mobile: 20 30 05 08 **Office:** 74 24 12 40 **E-mail:** bkarray@yahoo.fr

Estimation of the potential of olive oil production and exportation (Questionnaire)

1. What is your field of activity?

Production Transformation Exportation Importation Research Administration

2. What are the main external factors (opportunities and threats) that will determine Tunisian olive oil exportations to the European Union within the next decade (horizon of 2015)? Add to the list of the factors proposed, then classify them in terms of importance, marking with 1 the most important factor and with 5 the least important one.

Opportunities

_____ Increase in the European demand of olive oil importation

_____ Increase in olive oil demand by the emergent markets such as the USA, Australia, Canada and Japan

_____ Inward- processing regime exempted from customs duties

_____ Preferential regime (Quota of 56 thousand tons exempted from customs duties)

_____ Improving the image of Tunisia as a country producer and exporter of olive oil on the traditional markets (European Union) and non-traditional ones (USA, Canada, Australia, Japan)

_____ Difficulty to supply European packers because of a cartel position of the Spanish production cooperatives

Observations and comments

Threats

_____ The importance of tariffs applied to olive oil importations from Third countries in normal regime

_____ Production aid granted to European producers

_____ The adoption of more and more restraining standards of quality and marketing

(Traceability, labeling, packaging...)

_____ The emergence of new countries producers and exporters of olive oil that can benefit from certain tariff preferences on the European market

_____ Others (precise)

.....
.....

Observations and comments

3. What are the main internal factors (strengths and weaknesses) that will determine Tunisian olive oil exportations to the European Union within the next decade (horizon of 2015)? Add to the list of the factors proposed, then classify them in terms of importance, marking with 1 the most important factor and with 10 the least important one.

Strengths

_____ The strategic geographical position of Tunisia (closeness to Europe, the first olive oil consumption market)

_____ Diversity of olive inheritance in Tunisia

_____ The emergence of Tunisian producers oriented to the production of quality oils

_____ Manpower and mechanical traction relatively less expensive with regard to the competing European countries.

_____ Huge possibilities to promote organic olive oil

_____ The possibility to promote oil olive in irrigation and at high densities

_____ Safeguard control of the national olive inheritance

_____ The long experience of the ONH in exportation matter

_____ The emergence of new private operators in the collection and marketing of olive oil

_____ The importance of tourism sector

_____ Starting the production of new plantations

_____ Promotion efforts for a better development of packed exportations

_____ Possibilities to develop signs of quality

_____ The policy of promoting olive growing sector in Tunisia

Observations and comments

Weaknesses

_____ The concentration of about 70% of olive plantations in the arid and semi-arid regions of Tunisia

_____ Very small proportion of the area of oil olive tree conducted in irrigation

_____ Production alternation and low productivity of plantations because of the drought and the lack of maintenance, planning and restructuring of olive plantations, in particular, senescent ones

_____ Absence of reserve stocks in olive oil

_____ Little efforts to maintain the product quality and development

_____ Developing a speculative spirit, with a little effort of prospecting, selection and markets study, together with a manifest lack of marketing strategies

_____ Difficulty to access funds which are not generally available

_____ Information problem at all levels of the olive oil sector

_____ Absence of horizontal and vertical integration between the sector segments

_____ Predominance of olive oil market in bulk

_____ Raising the cost of olive oil production

_____ Raising the cost of olive oil exportation

_____ Concentration of Tunisian olive oil exportations on two markets (Italy and Spain)

_____ Absence of long-term strategy for the olive growing sector

_____ The rigidity of the Tunisian regulation with regard to olive oil exportation

_____ Difficulty to make use of the acquirements of the research and training in the sector

Observations and comments

4. Suppose that Tunisia is confronted by no market constraint (the European Union removes all protection from its market and thus Tunisia could export all of its product), of how much could she augment her production in olive oil within the next 5 and 10 years ? (Average production during the periods 2006-10 and 2011-15)

..... Thousand tons of olive oil for the next 5 years

.....Thousand tons of olive oil for the next 10 years

5. What actions allowing this increase? Complete the list of the proposed actions, and then classify them in terms of importance, marking with 1 the most important and with 5 the least important one

___ Extending oil olives in irrigation

___ Extending oil olives in dry and revising plantations densities

___ Restructuring senescent plantations through uprooting and replanting , with a revision of densities

___ Promoting hyper-intensive plantations

___ Augmenting yields through the application of good agricultural practices

___ Encouraging cloning for Tunisian varieties in intensive plantations

___ Others (precise)

.....
.....
.....

Observations and comments

6. The annual quota granted to Tunisia is of 57167 tons divided into monthly quantities (1000 tons in January and February, 4000 tons in March, 8000 tons in April and 10000 tons in each of May and October). Suppose that this quota attains 86 thousand tons without altering the monthly distribution; how much could Tunisia export to the European market in this regime during the next 5 and 10 years ? (Average exportations during the periods 2006-10 and 2011-15)

* Exportations in bulk.....thousand tons for the next 5 years andthousand tons for the next 10 years

* Packed exportations.....thousand tons for the next 5 years and.....thousand tons for the next 10 years

7. Suppose that this quota attains 86 thousand tons, with an increase of 5 thousand tons in the quantities authorized in January and February ; how much could Tunisia export to the European market in this regime within the next 5 and 10 years ? (Average exportations during the periods 2006-10 and 2011-15)

* Exportations in bulk.....thousand tons for the next 5 years, and.....thousand tons for the next 10 year

* Packed exportations.....thousand tons for the next 5 years, and.....thousand tons for the next 10 years

8. Suppose that the European Union preserves the Inward- processing regime which enables European industrialists to import olive oil from Third countries , in exemption from custom duties, but under the condition of exporting to outside the European Union equivalent quantity of oil. How much could Tunisia export in this regime within the next 5 and 10 years ? (Average exportations during the periods 2006-10 and 2011-15)

..... Thousand tons for the next 5 years

..... Thousand tons for the next 10 years

9. Suppose that the European Union cancels the Inward- processing regime. What would be the consequences on the Tunisian exportations during the next decade (horizon of 2015)?

Fall in exportations of 30 %, 50%, 70%

10. The tariffs applied to European importations in olive oil in normal regime amount to 1245 Euros/ton for virgin non-lamp olive oil, 1226 Euros/tons for virgin lamp olive oil, and 1346 Euros/tons for refined olive oil. Suppose that the European Union lowers of 20% these tariffs; how much could Tunisia export in this regime during the next 5 and 10 years? (Average exportations during the periods 2006-10 and 2011-15)

* Exportations in bulk.....thousand tons for the next 5 years, and.....thousand tons for the next 10 year

* Packed exportations.....thousand tons for the next 5 years, and.....thousand tons for the next 10 years

11. The item 11 of the EC regulation n°865/2004 stipulates that if the price on the common market significantly exceeds, within a period of at least three months, 2846.4 Euros/tons for extra virgin olive oil, 2736 Euros/tons for virgin olive oil, and 2438.4 Euros/tons for lamp olive oil, it could be decided:

- To totally or partially suspend the application of common customs duties to olive oil, and define modes of such suspension,

- To open up to olive oil an importation quota to which are applied reduced common customs duties, and define modes of managing this quota.

Could you estimate the impact of these decisions on the Tunisian exportations to the European market during the next decade (horizon of 2015)

- Positive impact Negative impact

<p>Observations and comments</p>

12. In case of partial liberalization of European importations of olive oil, indicate the most important alternative (classify these alternatives in terms of importance, marking with 1 the most important, and with 4 the least important)

- ____ Augmenting the quota without modifying its monthly distribution
- ____ Augmenting the quota and augmenting the monthly quantities in January and February
- ____ Reducing the tariffs applied to importations in normal regime
- ____ Preserving the Inward- processing regime

13. Suppose that we have a total liberalization of European importations of olive oil; how much could Tunisia export to the European market during the next decade (horizon of 2015)?

* Exportations in bulk.....thousand tons for the next 5 years, and.....thousand tons for the next 10 year.

* Packed exportations.....thousand tons for the next 5 years, and.....thousand tons for the next 10 years .

14. Tunisia has authorized private exporters to export packed and organic olive oil within the framework of the quota. How much could these operators export to the European market, in this regime, during the next decade (horizon of 2015)

* Packed olive oil.....thousand tons for the next 5 years, and.....thousand tons for the next 10 year.

* Organic olive oil.....thousand tons for the next 5 years, and.....thousand tons for the next 10 years .

15. Tunisia has recently placed a schedule (of conditions) for private exporters; Could you estimate the impact of this schedule on the quantities exported by these exporters to the European market , during the next decade

- Positive impact
- Negative impact

Observations and comments

Thank you for your collaboration. We will inform you about the results of the first round of the survey before starting the second round.

Appendix 2: Estimation of the potential of olive oil production and exportation

We collaborate on a research project entitled "Impact of the liberalization of agricultural and agro food exchanges between the European Union and Mediterranean Third countries". The project activities concern fruits, vegetables and olive oil in the European Union countries, Tunisia, Egypt, Morocco, Turkey, and Israel.

For Tunisia, the fifth activity, anticipated within the context of this project, concerns the estimation on the future increase in olive oil production and on the proportion of this increase, which will be exported to the European Union within the next 5 and 10 years (horizon of 2015), under different scenarios of common market liberalization. This work employs the DELPHI method which consists in a recurrent process allowing an anonymous presentation of a set of judgments made by the informants, which will be re-evaluated later. It aims at gathering several experts' opinions about a precise subject, highlighting opinion convergences, and generating possible consensus.

The application of this method has to respect the principles of experts' anonymity, retroaction of information, and group statistical responses so that each expert reevaluates his opinions. Therefore we ask your participation to this activity, as one of the key experts in this sector. In the first round you have answered the questions with much precision.

In the second round, we inform you anonymously about the reaction of the rest of the experts' panel for the questions 3, 5, 6, 7, 8, 9, 12 and 13 in order to modify your answers. You can keep your first answer, but would you please justify it. For the questions 1, 2, 4, 10, 11 and 14, would you specify your degree of agreement using the scale 1 to 5.

Thank you for your help. We rely on your participation to the second round of the survey.

Sincerely yours

Dr. Boubaker KARRAY

Olive Tree Institute, PB 256 3000 Sfax

Mobile: 20 30 05 08, **Office:** 74 24 12 40, **E-mail:** bkarray@yahoo.fr

**Estimation of the potential of the Tunisian olive oil production and exportation
(Questionnaire of the second round)**

1. The main external factors (opportunities and threats) that will determine Tunisian olive oil exportations to the European Union within the next decade (horizon of 2015) are:

Opportunities: Please indicate your degree of agreement using the scale 1 to 5 below

1=totally disagree	2= fairly disagree	3=neither agree nor disagree	4= fairly agree	5= totally agree
--------------------	--------------------	------------------------------	-----------------	------------------

Opportunities	Degree of agreement
Increase in the European demand of olive oil importation	
Increase in olive oil demand by the emergent markets such as the USA, Australia, Canada and Japan	
Inward- processing regime exempted from customs duties.	
Preferential regime (quota of 57.167 thousand tons exempted from customs duties)	
Improving the image of Tunisia as a country producer and exporter of olive oil on the traditional markets (European Union)	
Difficulty to supply European packers because of a cartel position of Spanish production cooperatives	

Comment and justify your estimation

Threats: Please indicate your degree of agreement using the scale 1 to 5 below

1=totally disagree	2= fairly disagree	3=neither agree nor disagree	4= fairly agree	5= totally agree
--------------------	--------------------	------------------------------	-----------------	------------------

Threats	Degree of agreement
The importance of deductions applied to olive oil importations from Third countries in normal regime	
Production aid granted to European producers	
The adoption of more and more restraining standards of quality and marketing (traceability, labelling, packaging...)	
The emergence of new countries producers and exporters of olive oil that can benefit from certain tariff preferences on the European market	

Comment and justify your estimation

2. The main internal factors (strengths and weaknesses) that will determine Tunisian olive oil exportations to the European Union within the next decade (horizon of 2015) are :

Strengths: Please indicate your degree of agreement using the scale 1 to 5 below

1=totally disagree	2= fairly disagree	3=neither agree nor disagree	4= fairly agree	5= totally agree
--------------------	--------------------	------------------------------	-----------------	------------------

Strengths	Degree of agreement
The strategic geographical position of Tunisia (closeness to Europe, the first olive oil consumption market)	
Diversity of olive inheritance in Tunisia	
The emergence of Tunisian producers oriented to the production of quality olive oil and packed olive oils	
Manpower and mechanical traction relatively less expensive with regard to the competing European countries.	
Huge possibilities to promote organic olive oil and quality signs (AB, PDO, PGI, TSG, and mountain signs)	
The possibility to promote oil olive in irrigation and at high densities	
The safeguard control of the national olive inheritance	
History of Tunisia in olive production (tradition).	
The long experience of the ONH in exportation matter	
The emergence of new private operators in the collection and marketing of olive oil	
The importance of tourism sector	
Starting the production of new plantations	
Promotion efforts for a better development of packed exportations	
Policy of encouraging and prompting promoters at the different segments of the sector.	

Comment and justify your estimation

Weaknesses: Please indicate your degree of agreement using the scale 1 to 5 below

1=totally disagree	2= fairly disagree	3=neither agree nor disagree	4= fairly agree	5= totally agree
--------------------	--------------------	------------------------------	-----------------	------------------

Weaknesses	Degree of agreement
The concentration of about 70% of olive plantations in the arid and semi-arid regions of Tunisia	
Very small proportion of the area of oil olive conducted in irrigation	
Production alternation and low productivity of plantations because of the drought and the lack of maintenance, planning and restructuring of olive plantations, in particular, senescent ones	

Absence of reserve stocks in olive oil, and of encouraging and financing mechanisms of the private storing.	
Little efforts to maintain the quality and increase the value of the product.	
Developing a speculative spirit, with a little effort of prospecting, selection and market study , and a manifest lack of marketing strategies	
Difficulty to access funds which are not generally available	
Information problem at all levels of the olive oil sector	
Absence of horizontal and vertical integration between the sector's segments	
Predominance of olive oil market in bulk	
Raising the cost of olive oil production	
Raising the cost of olive oil exportation	
Concentration of Tunisian olive oil exportations on two markets (Italy and Spain)	
Absence of long-term strategy for the olive sector	
The rigidity of the Tunisian regulation with regard to olive oil exportation	
Difficulty to make use of the acquirements of the research and training in the sector, which affects the qualification level of operators and the innovation effort.	

Comment and justify your estimation

3. Suppose that Tunisia is confronted by no market constraint (the European Union removes all protection from its market and thus Tunisia could export all of its product), of how much could she augment her production in olive oil within the next 5 and 10 years ? (Average production during the periods 2006-10 and 2011-15)

	Main Value* of the 1st round Thousand tons	Your estimation Thousand tons
Average production (2006-10)	190	
Average production (2011-15)	250	

**The main value represents the median calculated according to the experts' answers in the first round.*

Comment and justify your estimation

4. Actions allowing this increase are:

Please indicate your degree of agreement using the scale 1 to 5 below

1=totally disagree	2= fairly disagree	3=neither agree nor disagree	4= fairly agree	5= totally agree
--------------------	--------------------	------------------------------	-----------------	------------------

Actions	Degree of agreement
Extending oil olives in irrigation	
Extending oil olives in dry, and revising plantations densities	
Restructuring old plantations through the uprooting and replanting , with a revision of densities	
Promoting hyper-intensive plantations	
Augmenting plantations yields through the application of good agricultural practices	
Encouraging cloning for Tunisian varieties in intensive plantations	
An integrated olive strategy well-founded on scientific arguments, clear objectives and mobilizing adequate human and material resources.	
Reinforcing financial availabilities for the benefit of the sector and granting direct aid to producers.	

Comment and justify your estimation

5. The annual quota granted to Tunisia is of 57167 tons divided into monthly quantities (1000 tons in January and February, 4000 tons in March, 8000 tons in April and 10000 tons in each of May and October). Suppose that this quota attains 86 thousand tons without altering the monthly distribution; how much could Tunisia export to the European market in this regime during the next 5 and 10 years? (Average exportations during the periods 2006-10 and 2011-15)

	Main Value* of the 1 st round Thousand tons	Your estimation Thousand tons
Exportations in bulk (2006-10)	74	
Exportations in bulk (2011-15)	76	
Packed exportations (2006-10)	4	
Packed exportations (2011-15)	8	

* The main value represents the median calculated according to the experts' answers in the first round.

Comment and justify your estimation

6. Suppose that this quota attains 86 thousand tons, with an increase of 5 thousand tons in the quantities authorized in January and February ; how much could Tunisia export to the European market in this regime within the next 5 and 10 years ? (Average exportations during the periods 2006-10 and 2011-15)

	Main value* of the 1 st round Thousand tons	Your estimation Thousand tons
Exportations in bulk (2006-10)	71	
Exportations in bulk (2011-15)	76	
Packed exportations (2006-10)	5	
Packed exportations (2011-15)	8	

** The main value represents the median calculated according to the experts' answers in the first round.*

Comment and justify your estimation

7. Suppose that the European Union preserves the Inward- processing regime which enables European industrialists to import olive oil from Third countries , in exemption from custom duties, but under the condition of exporting to outside the European Union equivalent quantity of oil. How much could Tunisia export in this regime within the next 5 and 10 years ? (Average exportations during the periods 2006-10 and 2011-15)

	Main Value* of the 1st round Thousand tons	Your estimation Thousand tons
Average production in Inward- processing(2006-10)	100	
Average exportation in Inward- processing (2011-15)	130	

• *The main value represents the median calculated according to the experts' answers in the first round.*

Comment and justify your estimation

8. Suppose that the European Union cancels the Inward- processing regime. What would be the consequences on the Tunisian exportations during the next decade (horizon of 2015)?

	Main Value* of the 1 st round (%)	Your estimation (%)
Fall in exportations of	50	

- *The main value represents the median calculated according to the experts' answers in the first round.*

Comment and justify your estimation

9. The tariffs applied to European importations in olive oil in normal regime amount to 1245 Euros/ton for virgin non-lamp olive oil, 1226 Euros/tons for virgin lamp olive oil, and 1346 Euros/tons for refined olive oil. Suppose that the European Union lowers of 20% these tariffs ; how much could Tunisia export in this regime during the next 5 and 10 years ? (Average exportations during the periods 2006-10 and 2011-15)

	Main Value* of the 1 st round Thousand tons	Your estimation Thousand tons
Exportations in bulk (2006-10)	10	
Exportations in bulk (2011-15)	13	
Packed exportations (2006-10)	2	
Packed exportations (2011-15)	5	

- *The main value represents the median calculated according to the experts' answers in the first round.*

Comment and justify your estimation

10. The item 11 of the EC regulation n°865/2004 stipulates that if the price on the common market significantly exceeds, within a period of at least three months, 2846.4 Euros/tons for extra virgin olive oil, 2736 Euros/tons for virgin olive oil, and 2438.4 Euros/tons for lamp olive oil, it could be decided :

- To totally or partially suspend the application of common customs duties to olive oil, and to define modes of this suspension

- To open up to olive oil an importation quota to which are applied common reduced customs duties, and define modes of managing this quota.

The impact of these decisions on the Tunisian exportations to the European market during the next decade (horizon of 2015) is :

Please indicate your degree of agreement using the scale 1 to 5 below

1=totally disagree	2= fairly disagree	3=neither agree nor disagree	4= fairly agree	5= totally agree
--------------------	--------------------	------------------------------	-----------------	------------------

Impact of the application of item 11	Degree of agreement
Positive	
Negative	
Null	

Comment and justify your estimation

11. In case of partial liberalization of European importations of olive oil , the desired alternatives are:

Please indicate your degree of agreement using the scale 1 to 5 below

1=totally disagree	2= fairly disagree	3=neither agree nor disagree	4= fairly agree	5= totally agree
--------------------	--------------------	------------------------------	-----------------	------------------

Partial liberalization alternatives	Degree of agreement
Augmenting the quota without modifying its monthly distribution	
Augmenting the quota and augmenting the monthly quantities in January and February	
Reducing the tariffs applied to importations in normal regime	
Preserving the Inward- processing regime	

Comment and justify your estimation

12. Suppose that we have a total liberalization of European importations of olive oil ; how much could Tunisia export to the European market during the next decade (horizon of 2015)?

	Main Value* of the 1st round Thousand tons	Your estimation Thousand tons
Exportations in bulk (2006-10)	148	
Exportations in bulk (2011-15)	191	
Packed exportations (2006-10)	5	
Packed exportations (2011-15)	15	

** The main value represents the median calculated according to the experts' answers in the first round.*

Comment and justify your estimation

13. Tunisia has authorized private exporters to export packed and organic olive oil within the framework of the quota. How much could these operators export to the European market, in this regime, during the next decade (horizon of 2015)

	Main Value* of the 1st round Thousand tons	Your estimation Thousand tons
Organic exportation (2006-10)	4	
Organic exportation (2011-15)	8	
Packed exportation (2006-10)	5	
Packed exportation (2011-15)	7.5	

- The main value represents the median calculated according to the experts' answers in the first round.*

Comment and justify your estimation

14. Tunisia has recently placed a schedule (of conditions) for private exporters; the impact of this schedule on the quantities exported by these exporters to the European market , during the next decade (horizon of 2015) is :

Please indicate your degree of agreement using the scale 1 to 5 below

1=totally disagree	2= fairly disagree	3=neither agree nor disagree	4= fairly agree	5= totally agree
--------------------	--------------------	------------------------------	-----------------	------------------

Impact	Degree of agreement
Positive	
Negative	
Null	

<p>Comment and justify your estimation</p>
--

Thank you for your collaboration. We will inform you about the results of the second round of the survey

Appendix 3: Olive oil Production and Exportations in Tunisia 1991-2005

Years	Olive oil production 1000T	Export HO	Olive oil export. to EU	Total EU imp.	EU extra imp.	EU intra imp.
		1000T	1000T	1000T	1000T	1000T
1991	280	158	130,586	571,411	134,886	436,525
1992	135	96	88,069	371,909	90,798	281,111
1993	210	123	91,55	417,491	92,131	325,36
1994	70	193	160,991	524,758	164,212	360,546
1995	60	90	113,73	474,887	157,924	316,963
Average	151	132	117	472	128	344
1996	310	29	34,718	443,073	72,561	370,512
1997	90	126	107,976	719,755	155,319	564,436
1998	180	124	96,48	661,363	116,524	544,839
1999	225	164	145,54	706,171	218,079	488,092
2000	115	114	100,607	655,513	108,321	547,192
Average	184	111	97	637	134	503
2001	30	95	85,047	780,863	130,309	650,554
2002	72	23	19,7026	804,2891	36,7607	767,5284
2003	280	40	36,311	832,6758	102,6978	729,978
2004	130	211	179,2148	964,7102	237,2933	727,4169
2005	200	97,5	96,138	855,483	191,874	663,612
Average	142	93	83	848	140	708

Source: Eurostat + IN

Appendix 4: Development of the trade balance of food oils
Unit : MD

Years	Olive oil exp. MTND	Vegetable oil imp. MTND	Balance MTND	IMP/EXP
1991	266808	56100	210708	
1992	138471	52424	86047	
1993	177252	65598	111654	
1994	305271	91613	213658	
1995	216613	111011	105602	
Average	220883	75349	145534	34
1996	117096	112574	4522	
1997	288450	99610	188840	
1998	213300	140200	73100	
1999	382741	126732	256009	
2000	263899	110100	153799	
Average	253097	117843	135254	47
2001	200270	126000	74270	
2002	55764	151500	-95736	
2003	114435	199498	-85063	
2004	707973	208092	499881	
2005	403825	215355	188470	
Average	296453	180089	116364	61

Source: INS

Appendix 5: Contribution of Tunisia to the world production
Unit : 1000T

	Tunisia	World	%
1991	280	2502	11,19
1992	135	1988	6,79
1993	210	2076	10,11
1994	70	1966	3,56
1995	60	1795	3,34
	151	2065	7,31
1996	310	2804	11,06
1997	90	2821	3,19
1998	180	2618	6,88
1999	225	2537	8,87
2000	115	2819	4,08
	184	2720	6,77
2001	30	3059	0,98
2002	72	2546	2,83
2003	280	3174	8,82
2004	130	2839	4,58
	128	2904	4,41

Source: FAOSTAT

Appendix 5 bis: Contribution of Tunisia to world olive oil exportations
Unit : 1000T

	Tunisia	World	%
1991	158	766	20,63
1992	96	614	15,65
1993	123	620	19,82
1994	193	748	25,80
1995	90	675	13,34
	132	685	19,28
1996	29	600	4,83
1997	126	961	13,11
1998	124	921	13,47
1999	164	964	17,01
2000	114	995	11,45
	111	888	12,54
2001	95	1141	8,33
2002	23	1036	2,22
2003	40	1089	3,67
2004	211	1491	14,16
	92	1189	7,76

Source: FAOSTAT

Appendix 6: European olive oil importations according to the origins

	1991	1992	1993	1994	1995	Average	2001	2002	2003	2004	2005	Average
Total olive oil importations (tons)	571411	371909	417491	524758	474887	472091	780863	804289,1	832675,8	964710,2	855483	847604
Importations originating from Third countries (tones)	134886	90798	92131	164212	157924	127990	130309	36760,7	102697,8	237293,3	191874	139787
Importations originating from Tunisia (tons)	130586	88069	91550	160991	113730	116985	85047	19702,6	36311	179214,8	96138	83283
Importations Intra-communities (tons)	436525	281111	325360	360546	316963	344101	650554	767528,4	729978	727416,9	663612	707818
Third countries other than Tunisia (tons)	4300	2729	581	3221	44194	11005	45262	17058,1	66386,8	58078,5	95736	56504
Tunisia/Extra-community (%)	95	97	99	98	70	91	64	54	35	76	50	60
Extra/total (%)	23	21	20	30	31	27	16	5	12	25	22	16
Tunisia/Total (%)	21	21	20	29	21	25	10	2	4	19	11	10

Sources EUROSTAT + our calculation

