development and agri-food policies in the Mediterranean region

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Centre International de Hautes Etudes Agronomiques Méditerranéennes

CIHEAM

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Preface

I. The publication of this report - which will then be up-dated on a yearly basis - is the natural outcome of a long process grounded in the missions entrusted to CIHEAM by its charter in 1962, on the initiative of a group of Southern European members of former OECD (Spain, France, Greece, Italy, Portugal, Turkey and Yugoslavia). Having realised that their agriculture was lagging behind that of the other Member States of the Organisation, the above countries committed themselves, in 1960, to accelerating their progress. The aim was to bring the development of their agriculture up to the standards of that in more advanced Northern countries through the strengthening of vocational training and agricultural research.

The International Centre for Advanced Mediterranean Agronomic Studies (CIHEAM) has been the result of this initiative. Initially made up of seven founding Member States, since the 1980s it opened up to some other Mediterranean countries, in conformity with the rules which govern its establishment.

Today, thirteen countries are members of CIHEAM, five of which are also EU Member States (Spain, France, Greece, Italy and Portugal). The other eight are Southern and Eastern Mediterranean Countries (Albania, Algeria, Egypt, Lebanon, Malta, Morocco, Tunisia and Turkey).

Yugoslavia, which was one of the Founding Fathers of CIHEAM, is no longer a member. The countries of former Yugoslavia, despite CIHEAM's official steps towards negotiations, have, so far, not taken any actions to apply for full membership.

CIHEAM's permanent mission is to foster co-operation between Mediterranean countries in the spheres that fall within its scope of activity, i.e. postgraduate agricultural training and the promotion of co-operative agronomic research.

Hence, CIHEAM is a regional Organisation which focuses on a sector - agriculture - which is strictly related to a number of economic activities, in particular the agro-food industry, as well as to many sensitive regional problems such as the use of water and land resources, the protection of the environment and rural development policy.

Thanks to its four Mediterranean Agronomic Institutes, located in Spain (Saragozza), in France (Montpellier), in Greece (Chania - Crete) and in Italy (Bari) and which are fully funded by the host countries, CIHEAM provides, according to the specialisations of the above Institutes, long-term postgraduate training leading up to a postgraduate certificate (duration of the course: one year) or to a Master of Sciences certificate (duration of the course or of the research: two years). In the academic year 1998-1999, 383 trainees followed the courses at the four CIHEAM Institutes: 224 for the 1st year and 159 for the 2nd year.

CIHEAM also organises short-term courses (lasting a few weeks) to up-date agronomists working for Public Administrations or professional or academic institutions and train them in specific topics identified within the framework of co-operative networks sponsored by CIHEAM.

This training and research work is carried out by the Mediterranean Agronomic Institutes in close co-operation with the Institutions in Southern and Eastern Mediterranean countries with a view to providing joint and targeted training according to the needs of the various Mediterranean countries.

Over the period 1998-2002, CIHEAM will commit itself to implementing a co-operation programme with the Commission of the European Union aimed at transferring the management of training and research activities to the Southern and Eastern Mediterranean partners. This programme is based on four regional action plans and the

Mediterranean Agronomic Institutes will work closely with appropriate Institutions in the Member States.

The regional action plans will take place:

in Egypt, where it will be focused on water (and will be developed by Bari MAI);

in Morocco, where it will be focused on rainfed agriculture (and will be developed by Saragozza MAI):

in Tunisia, where it will be focused on the development of agricultural policies (and will be developed by Montpellier MAI);

in Turkey, where it will be focused on renewable resources (and will be developed by Chania MAI).

II. This short overview of the activities carried out by CIHEAM testifies to its firmly rooted mission and thriving activities in the fields of agriculture and agro-food economy. It would suffice to review the training and research programmes implemented in the Mediterranean Agronomic Institutes and those envisaged within the framework of the new co-operation scheme approved by the European Union Commission to realise the deep agricultural nature of CIHEAM activities.

However, despite such evidence and the fact that CIHEAM has devoted years to studies - which are published in its “Options Méditerranéennes”, a journal that deals with the state of agriculture in some Member States, especially Maghreb countries and Albania - there remains a gulf which has not yet been bridged. The gap should be filled by a reference document which should reflect the progress of agriculture in all the Mediterranean countries and provide decision-makers with insights into this field. The lack of such a document is particularly felt under the present circumstances when Mediterranean agricultural economies - regardless of their degree of progress - are

suffering from the fall-out of trade globalisation and are being called to establish the Euro-Mediterranean partnership initiated in Barcelona by the EU Member States and by all the Mediterranean countries. The need to follow closely the developments of agriculture in the Mediterranean would obviously take into due consideration the peculiarities of the Mediterranean region. "The Mediterranean is in the first place a sea and the so called «Mediterranean region» includes countries encompassed in three continental sub-groups: Southern Europe, Northern Africa and Western Asia. Each sub-group is currently characterised by a different geo-political scenario and particular economic and social dynamics which lead them to drift away from each other"[1]. But quoting Jean-Claude Flamant again, a "region" is not only defined by a homogeneous territory, but most of all by "the existence of an active network of relationships".

Owing to its original composition and regional calling, focusing on agriculture, food supply and relating issues, CIHEAM boasts an "active network of relationships" which should be properly used in order to help establish an area of shared prosperity which is the ultimate goal of the Euro-Mediterranean partnership.

The following report on agriculture and food supply in the Mediterranean is aimed at filling the gap we have acknowledged.

III Thanks to the hard work and the political impetus of its Board of Directors, CIHEAM is delighted to have succeeded in devising a valuable tool to thoroughly investigate, analyse and consider the major issues and events which characterise the Mediterranean agro-food systems. It is too early to foresee the impact that this report - the first edition of which is fully funded by CIHEAM - will have on the

[1] Jean-Claude Flamant, Chairman of CIHEAM Scientific Committee, cf. «*Les nouveaux enjeux pour le CIHEAM...*». Communication submitted at the Workshop held in Istanbul (November 9-11, 1998), organised by CIHEAM the proceedings of which will be published in the journal "Options Méditerranéennes".

dynamics of the investigated phenomena. This first edition - that we are confident will be improved by the experience gained in the meantime and by the readers' critical remarks - will nevertheless remain a reference point in terms of method and structure for the future editions.

The method of work was devised thanks to the close co-operation between a network of correspondents from CIHEAM Member Countries and the editorial staff including researchers from the Institutes and was co-ordinated by the General Secretariat.

The report consists of three parts.

The first part, as wanted by the editorial staff, is divided in two chapters: the first chapter reviews the international or regional events that have marked the Mediterranean agriculture; the second focuses on recent macro-economic developments, in particular on the progress of agriculture in the Mediterranean Countries. The second chapter draws heavily on the contributions given by the local CIHEAM correspondents, complemented by information available in the publications edited by international organisations.

The second part of the report focuses on a topic of major interest to the Mediterranean region which will be chosen every year according to the circumstances. In this first edition, the focus is on the training of agro-food system specialists in the Mediterranean region. The choice has been conditional on the efforts made by CIHEAM in 1998 which were unquestionably crowned with success following the workshop held in Istanbul in November 1998.

The third part of the report provides statistical data and bibliographical notes which will be regularly updated in the future in order to provide useful data on key indicators to assess the progress of agricultural, food and rural economies.

In this edition, the major events which characterise the agricultural economies in the Mediterranean countries and which are described in the first chapter are those that have occurred in the wake of the liberalisation process affecting the trade in agricultural products. The agricultural policies of the Mediterranean countries are currently adjusting to a freer environment resulting from the Uruguay round of negotiations and the talks over a partnership with the European Union aimed at the establishment of a Euro-Mediterranean Free Trade Area.

The analysis of the impact of these moves highlights the potential and the weakness of the various regional agricultural economies connected mainly to the foreseeable developments in agricultural produce prices. The European policy and the implementation of Agenda 2000 have stressed the role of the EU as the largest importer of Mediterranean products and, within the EU, the role of Northern European countries which import 86% of citrus, 77% of tomatoes and 76% of vegetables from Southern Mediterranean countries. The role of Southern European countries in the production process, the trade in Mediterranean products, the lessons which can be learnt from their dynamic exports in a key sector such as that of fruit and vegetables, the competing productions in the Mediterranean region and the future developments of the co-operation policy are some of the topics which are analysed, discussed and constantly considered with a view to settling interest disputes the solution of which, though, remains in the hands of the regional policy-makers.

However, in order to fully understand the arguments put forward in the first chapter, it is necessary to read the second chapter which provides insights into the sectorial and national scenarios based on the analysis of the macro-economic developments - occurring in agriculture, in the agricultural and agro-food production and in the consumption trends - which stresses the traces left in each country by the changes which have taken place.

Hence, the first and the second chapter complement each other and should be read carefully before drawing any conclusions. Equally discussed are the most sensitive issues to an Organisation, such as CIHEAM, which groups together on an equal footing both Southern EU Member States and some other Mediterranean States which are not EU members but have committed themselves to establishing a Euro-Mediterranean partnership with the EU co-operation. The difficulties that some EU Southern regions are experiencing with their agricultural productions in increasingly freer markets are recognised and the potential repercussions of the exports of products from Southern Mediterranean countries are foreseen. The reading of the publication should confirm the equilibrium which the writing of the said publication has aimed to achieve. The suggested response to the shortcomings that Southern EU Member States are facing is to make an increased use of the structural funds to fuel the rural development. This strategy is likely to offset, in the long run, the impact of the removal of protection measures for agricultural exports from non EU Mediterranean countries.

But these countries - as the report points out - are also exposed to the consequences of the establishment of a Free Trade Area which might jeopardise any future prospects of increased agricultural productions which at the moment show a deficit. Why can’t a special section, within the framework of the MEDA programme and symmetrical to the current Agricultural Guidance and Fund, be envisaged to remedy the specific agricultural handicaps which constitute the biggest stumbling blocks to freer markets and the establishment of a Euro-Mediterranean partnership?

Here again, policy-makers will have to draw the relevant operational conclusions.

The objectives which the CIHEAM Board of Directors intend to achieve through this report are the following:

- improving the knowledge of the problems relating to the agricultural, food and environmental development in the Mediterranean countries,
- carrying out an economic analysis of some issues central to agriculture, food supply, and the management of natural resources in the Mediterranean countries,
- offering a retrospective and perspective analysis to help understand the development of agricultural, food and rural economies against the background of global, national and international economies.

We are convinced that the above objectives have been met. This report is addressed to Governments, national parliaments, local bodies, international organisations - in particular within the EU -, professional organisations and Universities and Research centres which are directly involved in devising the policies for the agro-food systems in the Mediterranean region. It is up to them to assess and react.

In deciding to publish this report, CIHEAM has acted in accordance with its desire to be of service to all the Mediterranean Countries and give substance to an ambition: becoming the privileged ground for the debate, the analysis and the monitoring of the major phenomena which guide the progress of the Mediterranean agriculture, the mother of all its activities.

Enzo Chioccioli
CIHEAM Secretary General

Foreword

The purpose of this report is to highlight the significance of the current process of internationalisation of agro-food systems in the Mediterranean Basin.

It brings together the results of a number of national reports and regional case studies on development and agro-food policies in the Mediterranean region either commissioned to a collaborative network of national correspondents or prepared by CIHEAM four Mediterranean Agronomic Institutes.

Much emphasis was put on external consultation in preparing this report.

The networking activity proved to be a valuable channel for clearing information and receive constructive feedback to prepare the report.

The national correspondent's network included S.Bedrani (Algeria), A. Abu-Zeid (Egypt), M. Hamze (Lebanon), N. Akesby (Morocco), M. Lasram (Tunisia) and E. Isikli (Turkey).

This report was prepared under the immediate supervision of Enzo Chioccioli, Ciheam Secretary General, by a team led by A. Di Giulio (Ciheam) and comprising A. Simantov (Delegate of Greece at Ciheam Governing Board), M. Allaya (Ciheam-Iam-M), F. Lerin (Ciheam-Iam-M), G. Mergos (University of Athens, Greece), G. Malorgio (University of Bologna, Italy), and J.M. Alvarez-Coque (University of Valencia, Spain).

CHAPTER I

Regional Analysis:

the Mediterranean region in a world economic context towards globalisation

Introduction

This chapter aims to provide insights into the current internationalisation process of agro-food systems in the Mediterranean Basin. Since the mid-1980s, much progress has been made across the Mediterranean Countries (MC) to negotiate, and occasionally adopt, a new institutional framework aimed at enhancing greater liberalisation of agricultural trade. Agricultural policies in Mediterranean Countries are increasingly involved in moves towards freer markets, as witnessed by the plethora of multilateral negotiations, the GATT's Uruguay Round of Trade Talks and the establishment of the Euro-Mediterranean Free Trade Area. Economic development is generally accepted as conditional on some degree of agricultural liberalisation. One of the major achievement of the Barcelona Euro-Mediterranean Conference was to ratify this common principle and promote "*a sustainable and balanced economic development with a view to creating an area of shared prosperity, in keeping with the various levels of growth*".

The Barcelona Process was initiated in the belief that it would create incentives to invest in emerging Mediterranean markets and provide the scope for commercial integration and political and human partnerships. Against the background of these policies, the Euromed *ad hoc* Ministerial meeting held in Palermo (June 3-4, 1998) stressed the need for a mutually satisfactory compromise over agriculture to wind up the negotiations that had led to the establishment of the Euro-Mediterranean Free Trade Area. Agriculture is one of the keys to regional integration. It plays a major role in most Mediterranean economies, accounting for 10-15% of total GDP in

Non-Community Mediterranean Countries (except oil-producing countries) and less than 3% of aggregate GDP in EU Mediterranean countries. However, the importance of agriculture cannot be confined to a share of the overall economic activity. Agriculture underpins food-processing industry in advanced countries as well as in the so called "developing" countries and plays a vast array of roles that range from producing food for self-consumption to boosting rural development, ensuring environmental conservation and fulfilling a symbolic and cultural purpose. But in the absence of a global market, liberalisation cannot be the only cure.

As a result of the economic globalisation, agro-food systems have come under increasing pressure and have been confronted with the shortcomings of the fierce competition among trading partners, each with different national rules, procedures and economic growth.

The growing share of trade (imports and exports) witnesses to the internationalisation of the agro-food systems in the Mediterranean Countries. Biotechnology developments, rapid advances in facilities and services, the increasing role of distributors within the food chain, the introduction of new products, processes and production methods, the need to meet the growing demand for quality food products are some of the main challenges now facing the sector.

Despite the general consensus, many observers are sceptical about the benefits that this strategy might bring to the Mediterranean rural economies. Any assessments made so far of countries, regions and sectors have been inevitably biased by the economic and social situation and the sector is increasingly becoming the focus of political negotiations. Different groups lobby powerfully on specific protection measures which, however, threaten to harm the agricultural sector and cut it out of the global trade liberalisation and regional economic integration now underway.

The vast majority of Mediterranean Countries will initiate in the next few years negotiations on regional and multilateral agreements. The inclusion of agriculture in the regional round of negotiations is the main challenge of the Euro-Mediterranean Partnership. The Common Agricultural Policy (CAP), as well as agricultural policies of Eastern and Southern Mediterranean Countries and the Middle-East, will need to be retargeted to this common goal. However, in a moment of multilateral talks at the World Trade Organisation (WTO), focusing more on domestic policies, national institutions and on the social, economic and political compromises reached in each economic context, it would be paradoxical not to consider the Euro-Mediterranean Free Trade Area as a frame in which to develop actively a dialogue and concertation on development policies.

The introduction of agriculture in the agenda of the Mediterranean round of negotiations should be complemented by the establishment of an economic partnership on equal terms. A global balance should be pursued between the Southern and Eastern rims of the Mediterranean and a reform of the agricultural and trade policies in act in each economic partner. A set of co-ordinated reforms would help to promote intra-regional trade adding to bilateral trading arrangements between the EU and Non-Community Mediterranean Countries. In addition, the revision of the CAP should also be aimed at easing solidarity among the EU regions. It is fair to say that the reform of the agricultural policies and the reduction of barriers to trade are more likely to be successful if world food demand stays high and economic growth stable. Indeed, world price fluctuations affect the capability of agro-food systems to adjust to the moves towards freer markets. Policy-makers are not insensitive to market developments and the economic and political expectations of the various parties will largely determine the position they take in the agricultural round of negotiations, both on the regional and the multilateral level.

I. Food security

There are several estimates, referring to the early decades of the twenty-first century issued by experts and international organisations concerning future market trends for staple food produces. The projections encompass a series of assumptions, such as the impact of agricultural reforms, the increase in productivity, macro-economic developments and some additional factors affecting food production, trade and consumption. According to (FAPRI[2], USDA, IFPRI and OECD) trade will increase at the beginning of the next century and rather high prices till the year 2005. Different scenarios are envisaged as to price fluctuations. Whereas OECD forecasts prices increase higher than that recorded in the early 90s, IFPRI and the World Bank foresee a decline in real prices in the long run. In both scenarios, food shortage would not occur as a result of the gap between supply and demand.

Strong world prices would undoubtedly be conducive to the liberalisation of agricultural trade, but too many uncertainties - the recent Asian crisis to name one - make it difficult to devise reliable medium-term forecast models. Economic growth has an enormous impact on trade demand, but if growth is not widespread, governments might be tempted to return to intervention policies which supposedly would balance the negative externalities of the international environment.

Despite the expected future balance between supply and demand, food security remains a critical issue. Agro-food markets are experiencing growing instability and some developing countries are at a greater risk of having to depend largely on such markets, in a foreseeable future, to meet their needs.

However, the trade of agricultural commodities is expected to rise markedly, but regional unbalances are bound to remain the same and

[2] Food and Agricultural Policy Research Institute (Iowa State University)

surpluses in some industrialised countries together with deficits in developing countries threaten to result in a structural world food shortage. Reportedly IFPRI projections for the next decade forecast an increase in the consumption rate of crop and animal products higher than the production capabilities of most developing countries. These countries imported 90 million tonnes of grain stocks in 1990. They are very likely to import approximately 190 million tonnes in the year 2020.

According to Food and Agriculture Organisation (FAO) estimates, imports are expected to climb to a staggering 360 million tonnes in 2030 against 150 million in 1994-96.

This is the case with a number of Mediterranean Countries which import staple food products have fluctuating agricultural yields and suffer from water shortage. Some of those are the most commonly cited examples of growing dependence upon outside suppliers (e.g. in the past 3 decades Algeria has seen its imports of grain stocks grow from 8% - by the mid-1960s - to 82% during the 90s.) The Near East and the Middle East rank as the most import-dependent regions in the world, with respect to grain stocks. Food imports account for the largest share of total imports in four Mediterranean Countries: Algeria, Egypt, Jordan and Syria.

Some of the factors that have triggered the rapid consumption growth in the past still persist today: rapid population growth, water shortage and land scarcity, technical obstacles to yield increases, lack of capitalisation of farms, poor or insufficient facilities. These constraints which have long been the biggest stumbling blocks to agricultural progress are heightened by significant increases in the globalised economy. However, Southern and Eastern Mediterranean Countries account a growth rate ranging between 5 and 6%, which should enable them to attain unrivalled economic performances in the 90s and lead to an increase in the demand for grain stocks and agro-food products, consistent with the 1997-98 FAO estimates.

However, food security is not only an issue for the agro-food balance of trade, it poses a real threat to the availability of enough quality food. Hence, it is not surprising that poverty and possible control measures have taken centre stage. The globalisation of the world economy and the move towards liberalisation in most Mediterranean Countries have increased the social gaps. A part of the population has brought production models and methods up to the standards of those in the advanced countries, whereas the remaining part has been confronted with appallingly precarious living standards and dreadfully insufficient food stocks. And the national strategies centred on total stocks are being replaced by the income bracket policy (See Chapter II about national analyses).

Most Mediterranean countries started focusing on food self-sufficiency between the late 70s and the early 80s. EU countries had already reached this goal in the late 70s.

Conversely, in Southern and Eastern Mediterranean countries the need to sustain and mobilise the national products have long been a key political issue which has led to the reduction of the production costs of primary products well below the international standards as well as aids to production and grants to producers.

In the meantime, governments had to maintain or increase aids to consumption for basic commodities. These cuts in the consumption expenditure for food accounted for more than half the total consumption expenditure and, as a result of low food produce prices, also salaries were kept rather low.

Food aids, which are also a means for the State to keep social riots at bay, pose additional budget strains. As food aids were deemed untouchable, budget cuts were diverted to some other items of social expenditure (namely health care and education) or investment spending. But the issue is far from solved. Aid to consumption is the only important variable which has not yet been adjusted and cuts in other budget items

threaten to jeopardise short-term and long-term growth. Governments are currently trying to retarget aids and implement strategies similar to those adopted in Latin America in the late 80s which focused on the most vulnerable social groups - from then on called “target groups”.

Hence, food security policies in Southern and Eastern Mediterranean Countries are still in a transitional stage and will largely depend on global economic growth prospects.

Some deeply unequal trends underlie growth in freer markets. Social exclusion and poverty, plagues which seemed to have almost completely disappeared during the so called “glorious thirties”, are resurfacing in Northern Mediterranean industrialised countries though to a lesser extent than in developing countries. Food insecurity is on the increase in many countries at various social levels. In France, almost one million people are in need of food assistance and the major Non-Government Association (Les Restos du Coeur) delivered some 59 million free hot meals in the winter of the 1997.

The “mad cow” disease (bovine spongiform encephalopathy), water contamination, the threats posed to the food chain, the homologation of Genetically Modified Organisms, etc. indicate that food security is a quality issue as well.

Industrialised countries should set up a co-operation pole for the whole region, since environmental or agro-industrial contamination of the food-chain are not only confined to advanced countries and add also to the food insecurity of less developed countries.

Food security, both in quantity and quality terms, makes up a “common asset” in the Mediterranean region as a whole.

Who is going to meet the Mediterranean growing demand?

A sound international market is essential for both exporting countries, such as France, and importing regions, such as Middle-East and North African countries, whose trade balances will depend largely on stable and reliable agro-food markets. The question remains whether resources and technology will be sufficient to ensure a sustainable production growth rate worldwide and balance the demand through low or decreasing real prices.

According to FAO experts (Alexandratos & Bruinsma, 1997), the output growth rate of exporting countries has dropped from 2.8% per year in 1961 to 1.2% year between 1986 and 1996. But also in some exporting areas, such as the EU, the strategies adopted to curb production (e.g. MacSharry reform in 1992) have curtailed the production growth rate. As to the EU, it is widely accepted that the high growth rate of grain production has resulted in surplus stocks, in the early 90s, in markets with low international prices and relatively high intervention prices. In a different scenario - with relatively high world prices, cuts in market aids and direct payments to farmers - will the EU be able to enhance its imports without relying on export subsidies? This could be the case since the *Agenda 2000* provisions envisage an improved international competitiveness of European agriculture.

Box I-1: Agenda 2000: increasing international competitiveness of EU agriculture

The boundaries between internal and external markets are increasingly becoming permeable as a result of the growing globalisation of agro-food systems and of the commitments taken under the Uruguay Round over the reduction of guaranteed farm prices. Against this background, the Agenda 2000 aims, among other goals, at strengthening the role of EU on the international market, through a market-oriented approach according to that, domestic intervention measures will have no part in producer price setting. The moves towards the liberalisation and the enlargement of the Union to Eastern countries have prompted the Commission to propose a

reduction in intervention prices at international levels. By the year 2000, intervention prices will have to be reduced as follows: by 20% for arable crops, 30% for beef and veal and 15% for milk. Not surprisingly, this agricultural policy has met opposition from European farmers but has been accepted as inevitable. These provisions have proved rather costly. After the 1992 reform, the intervention price reduction are compensated by direct grants and premiums to the farmers. Compensations are partial forms of payments: 50% for cereals and milk, 70% for beef and veal and are to be managed by the Member States.

The Agenda 2000 includes additional proposals to develop rural areas and horizontal rules. As to the market regulation, the proposed strategy envisions a reduction in price support to lower or abolish export subsidies. The orientation is self-evident, but it is too early to say whether export subsidies will be definitely removed, namely for cereals and milk. On the other hand, aids to farmers foster the cultivation of lands as the attempt to break the links between aid and food production (decoupling) is far from complete.

Compensations in the form of payments and premiums granted on the basis of hectares of arable lands have been strongly criticised because of their impact on productivity, mainly in non-irrigated areas in Southern Europe (Italy, Portugal, Spain). Support in the form of area-based direct payments threatens to penalise skills and professionalism and lead farmers to "crop subsidies" instead of cropping cereals, thus halting the gradual adjustment of agricultural structures and the integration of new technologies.

During the next decade, the Mediterranean is bound to become an increasingly wider market for EU agricultural products (cereals, food products, livestock, beef, milk and dairy products, sugar and processed products). Statistics according to the EU is a net exporter of agricultural products towards non-member countries - with a surplus of the trade balance of ECU 1.543 billion in 1995 and of ECU 832 million in 1996.[3]

[3] Data provided by Eurostat and European Commission (DG VI). Trade balance refers to chapters 0, 1, 21, 231, 24, 261-265, 268, 29, 4, 592.12 . Non-Community Mediterranean countries include: Cyprus, Egypt, Jordan, Israel, Lebanon, Libya, Morocco, Malta, Tunisia, Turkey and Syria.

Table I.1. EU trade balance of agricultural products with Non-Community Mediterranean Countries *(1)* 1995 & 1996, Mio ECUs

Chapter	Products	1995	1996
	(2)		
0-9	All products	14895	16076
	Agricultural products (total)	*1543*	*823*
00	Livestock	357	275
01	Meat	307	239
02	Milk and eggs	520	575
03	Fish	-328	-375
04	Cereals	1046	940
05	Fruits and vegetables	-2037	-2323
06	Sugar and honey	611	510
07	Coffee, cocoa, tea, spices	107	80
08	Feed-stuff	233	197
09	Other food products	221	291
11	Drinks	129	124
12	Tobacco	15	41
21	Leather	66	125
22	Oilseeds	15	-27
231	Raw rubber	1	2
24	Wood and cork	482	387
(2)	Textile fibers	-107	-73
29	Agricultural raw materials	-228	-256
4	Oil and fats	130	87
592.12	Gluten	4	5

Source: Eurostat and European Commission (DG VI)
(1) Cyprus, Egypt, Israel, Jordan, Lebanon, Malta, Morocco, Syria, Tunisia, Turkey.
(2) Chapters 0, 1, 21, 22, 231, 24, 261-265+268, 29, 4, 592.12

II. Markets

The Mediterranean region is playing an increasingly significant role in world markets, accounting for 20% of world trade in 1995. It would be inappropriate to qualify it as a regional market given its prevailing "bilateral" character - most exports are towards European markets. This applies mainly to the EU Member States such as Spain which carries out 72% of its trade with the EU, France (63%), Greece (57%), Italy (57%), and Portugal (81%) and could be regarded as the logical consequence of the economic integration process which is in progress within the EU. Non-Community Mediterranean Countries show a similar trend: approximately 50% of their exports are to Europe. The phenomenon is even more striking in the Balkans which, prior to go democratisation process and the transition to a market-economy, had important economic relations with the other countries of the "Eastern bloc" and which then have had to re-orient almost all their trade towards Europe (both imports and exports). Trade among Non-Community Mediterranean Countries is rather weak. The World Bank estimates that just 8% of the overall trade of Middle-East and North African Countries could be included under the heading of inter-regional trade, a percentage which is the lowest of those recorded in all world regional blocs.

Agricultural products account for 12% of imports and 11% of exports of Non-Community Mediterranean Countries. These percentages are decreasing as a result of the diversification of the economic activities, of the industrialisation policies and of the importance of the energy sector (oil and gas). On the other hand, agricultural exports remain high for some non oil-exporting countries. In 1995, they accounted for 10% of the aggregate exports in the following countries: Albania (11%), Croatia (39%), Cyprus (51%), Egypt (16%), FYRM[4] (23%), Greece (31%), Lebanon (13%), Morocco (17%), Spain (14%), Syria (21%) and Turkey (20%).

[4] Former Yugoslavian Republic of Macedonia.

Europe has long been the main destination of the regional agricultural trade. In 1994, 55% of agricultural exports by Non-Community Mediterranean Countries were towards Europe. Some countries record exports to the EU which exceed 35%: Algeria (79%), Egypt (35.1%), Israel (62%), Morocco (82%) and Tunisia (73%).

Hence, the access to European markets is essential for Mediterranean agricultural exports. However, data also indicate that the diversification of export destinations is a must together with the development of intra-regional-oriented trading strategies. One of the main concerns of the Euro-Mediterranean association is to prevent the achievement of globalisation to the detriment of regional markets. It is not yet clear? whether the agricultural products will be encompassed in the regional approach - which assumes a reduction in (tariff and non-tariff) customs duties. Intra-regional initiatives may serve as a means to iron out strained regional relations and negotiators will have to take them into account.

The preferential trade with the European markets is also typical of the Mediterranean countries which are members of the EU, as shown in the Table I-2:

Table I-2. EU Mediterranean countries: Preferences towards selected EU 15 markets in "sensitive products". Share of EU exports on total exports (%), 1996

	France	Greece	Italy	Portugal	Spain
Cauliflower	98	71	69		86
Tomatoes	81	34	84		51
Other Vegetables	84	70	67	70	96
Apples, pears and peaches	86	78	87	81	94
Citrus	83	19	49	60	82
Table grapes	86	88	83	67	92
Other fruits	78	71	83	85	82
Table Wine	78	84	82		52
Other Wine	70	74	63	58	80

Source: Eurostat and SPEL (Sector Model for Production and Income of the European Agriculture) System

The EU is the largest importer and distributor of Mediterranean products. Note that these imports characterise Northern Community Members and not NCMC. The latter accounted for 86% citrus imports, 77% of tomatoes, 80% of fruits and 76% of vegetables. In other words, the European trade structure features Northern member States as the main importers - a data which partly explains the different North / South position in the Community discussions about trade originating from Non-Community Mediterranean Countries (NCMC).

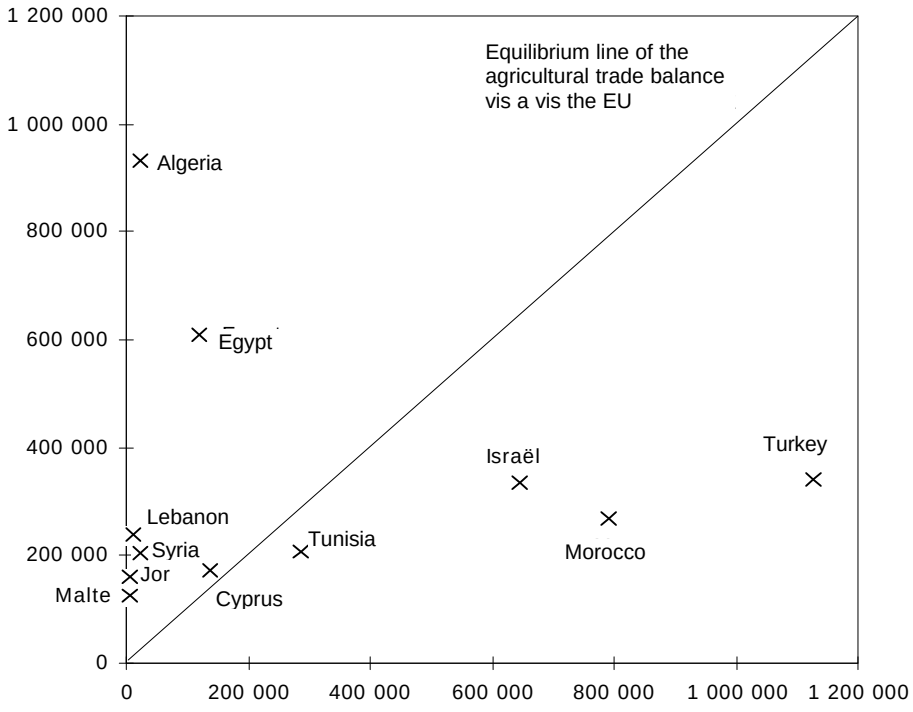
A. What impact have liberalisation measures had on NCMC preference towards the EU?

The whole Non-Community Mediterranean Countries show an economic openness rate (ratio foreign trade / GDP), among the highest in the world (around 75%, based on IMF estimates, by the mid-1999s,compared to 72% recorded in Asia). This evidence should not be taken as an indicator of non-protectionist measures: the weighted average tariff in the region is 22.6% compared to14.1% in Latin America. Nevertheless, this average ratio conceals some striking discrepancies – according to IMF, Israel has a rate of 7% and Tunisia, despite its structural adjustment and liberalisation plan, still has a rate of 32%.

A regional preference towards the EU stands out in all Mediterranean agricultural economies, as a rather logical choice provided the similarities in terms of North-South integration in a number of production and processed clusters, such as fresh or refrigerated products. This can apply to exporting countries, in general, and in particular to three NCMC with a surplus trade balance such as Israel, Morocco and Turkey, and for deficit countries (Algeria) as shown in fig 1.

Despite Lebanon, Jordan and Syria (see fig. 2), all the remaining Mediterranean Countries have increased their preferential agro-food trade with the EU following the liberalisation of markets. This is specifically the case for NCMC (Maghreb and Middle East) but also for Turkey, which has

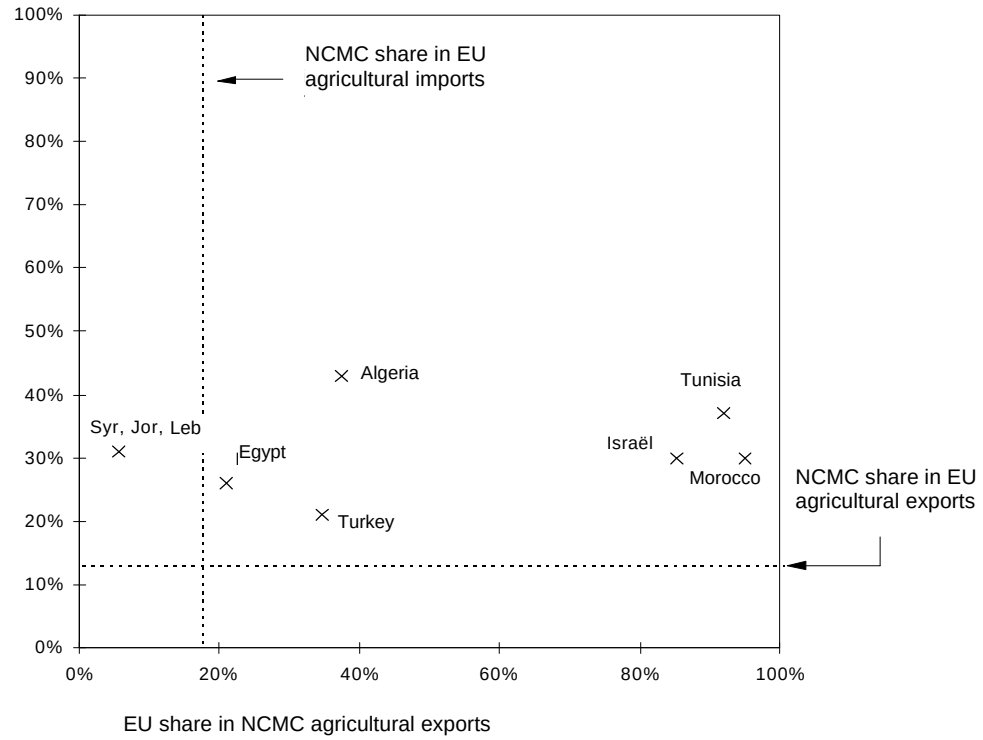
also increased exports to nearby oil-producing markets and to the former USSR states. Turkey is a major exception in a region where domestic trade (outside the EU) is very low. The situation is even more interesting in the Balkans (except for Yugoslavia on which an embargo has been imposed for political and military reasons). Former Communist states have radically altered their agricultural trade which in the past used to be oriented towards countries with a similar economic structure.



NCMC agricultural exports towards the EU

Source: Solagral, 1998

Figure I-1: Imports and exports of NCMC agricultural products from and to the EU.



Source: Solagral, 1998

Figure I-2: EU mean share in agricultural trade (imports and exports) from NCMC.

B. Regionalisation and the impact of market liberalisation

Mediterranean products account for the majority of agricultural exports by Non-Community Member States, fruit and vegetables representing 58% of the aggregate exports in 1996 (See Table I.3). Hence, it is not surprising that most of the political debate on the tariff reductions granted by the EU to NCMC is focused on these products, which are among the main sources of agricultural income in some regions of the EU Mediterranean Member States. According to data compiled by Eurostat SPEL (Sector Model for Production and Income of the European Agriculture), fruit and vegetables in Greece and in Spain account for more than one-third of the agricultural gross value at market prices.

In order to asses the effects of this competition over Mediterranean agricultural products, we should shift the attention from the "national" to the "regional" scenario, since the effects are concentrated in a limited number of regions. Therefore, the Mediterranean products (fruit and vegetables, wine, olive oil and flowers) account for 40% of the overall value of agricultural production in four Greek regions (the Islands and the Peloponnese), in six Spanish regions (La Roja, Andalusia, Murcia, Valencia, the Canary Islands and the Balearic Islands), in seven Italian regions (Liguria, Trentino-Alto-Adige, Lazio, Campania, Abruzzi, Apulia, Calabria and Sicily), in two Portuguese regions (Algarve and Madeira) and in three French regions (Languedoc-Roussillon, Provence-Alpes, Côte d'Azur and Corsica). Most of these regions are located along the Mediterranean coastal area and show different patterns of product specialisation when compared to the remaining regions of each respective country. This is the reason why, when Mediterranean products are qualified as "sensitive" during negotiation rounds with NCMC, it is not simply because they make up the European agricultural output, but also because the strain of foreign competition is concentrated on limited territories.

Therefore, the Mediterranean trade has a local character which should not be disregarded in discussing market impacts. As to agricultural policies, accompanying measures have to be promoted in order to prepare and help the regions to adjust to a market-oriented economy. Pertinently, the Euro-Mediterranean Free Trade Area should press the case for some structural measures that take into account possible enhanced competitiveness in the most affected regions. This principle should also apply to the other Mediterranean countries, where market impacts differ from one region to the other.

Table I.3. Non-Mediterranean Countries *(1)*: exports towards the EU *(2)* per product, 1996

Chapter	Products	Million Ecus	% of total
	Agricultural products (total) *(3)*	4363	100,00
00	Livestock	6	0,14
01	Meat	38	0,87
02	Milk and eggs	7	0,16
03	Fish	455	10,43
04	Cereals	30	0,69
05	Fruit and vegetables	2552	58,49
06	Sugar and honey	52	1,19
07	Coffee, cocoa, tea, species	51	1,17
08	Feedstuff	25	0,57
09	Food products	44	1,01
11	Drinks	53	1,21
12	Tobacco	100	2,29
21	Leather	38	0,87
22	Oilseeds	53	1,21
24	Wood and cork	15	0,34
2	Natural textile fibers	246	5,64
29	Agricultural raw materiales	364	8,34
4	Oils and fats	234	5,36

Source: Eurostat and European Commission (DG VI Agriculture)
(1) Cyprus, Egypt, Israel, Jordan, Lebanon, Libya, Malta, Morocco, Syria, Tunisia, Turkey.
(2) 0, 1, 21, 22, 231, 24, 261-265+268, 29, 4
(3) EUR 12

III. Trade parameters of sensitive products - the case of fruit and vegetables

Globalisation is an old phenomenon for Mediterranean products, but its progress is much slower than that of some other products. Globalisation should be viewed as an irreversible process which is triggered by basic technological changes in communication and information services and by flows of goods and capital. It is impossible to halt or slow down such a process - even in the face of the very high protectionist measures within a single country or groupings of countries. "*The only sensible way is to make globalisation work for all and each*" stated Renato Ruggiero at the Middle-East and North African Conference (MENA) III (Cairo, November 1996). This statement may also apply to the Mediterranean agricultural products. Markets are governed by complex forces and so foreign trade policies, though important, are not the only forces at work in the establishment of trade structures. The case of fruit and vegetables is an illuminating example.

The challenge to supply seasonal and perishable products all year round has spurred the international trade and favoured the integration of the fresh fruit and vegetables sector. However, most fruit and vegetables are for domestic consumption and only 4.4% of vegetables and 8.9% of fruits are traded internationally. Exports of these products have traditionally accounted for low percentages of the overall production (though varying widely per kind and per country), due to trade barriers, but also to the short shelf-life and to long-distance shipment costs. Breakthroughs in post-harvest techniques and in the control of the "cold chain" have made it possible to ship perishable commodities over long distances. These advances, along with more dynamic supply and demand patterns, have boosted the trade of horticultural products, which nowadays covers a wide range of commodities, countries and marketing channels. Today's demand for high quality, diversified products all the year long is

on the increase. And it is this growing demand that stimulates trade, as no country produces enough quality fresh fruit and vegetables all year long.

The European Union is the main actor in the fresh fruit and vegetables market. Its 15 Member States contribute, via their imports and exports, to 1/5 of the world market. Germany is the main importer, Spain is the principal supplier and the Netherlands play an important part in the management of distribution flows. However, imports are stagnant. According to Eurostat, imports from the 15 EU Member States have climbed to 13.7 million tonnes (MT) in 1997, against 14.8 MT in 1998. The increase in fresh fruit imports (8.4 MT in 1998, against 6.1 MT in 1996) has not offset the drop of vegetables imports (8.6 MT in 1996 against 5.3 MT in 1998).

By contrast, EU fruit and vegetables exports have increased from 2.5 MT in 1996 to 3.9 MT in 1998.

To some extent, exports growth has been more marked for fruit than for vegetables. Nevertheless both have shared the export peak. Fruit accounts today for 59% of the total demand and this confirms the increasing demand in developing countries.

The changing trade patterns in the horticultural sector have attracted new private firms and entrepreneurs wanting to capitalise on and contribute to the current trends. Strategic alliances and *joint ventures* enable small and medium-sized businesses to join the global trade and expand their market shares without necessarily becoming transnational firms. The participation to trade of non-traditional firms, such as those of the grower-shipper diversifies and multiplies marketing circuits. In addition, a few multinational companies and long-standing international traders are wrestling to develop truly global brands while adding to the existing product lines (e.g. Dole, Del Monte, Chiquita). The constant increase in the number of firms and countries involved in the process is bound to enhance competition.

Consolidation of buyers is expanding across the European food-distribution chain and fostering demand for considerable volumes and high quality standards thus obliging firms to improve their supply management capability. Buyers are increasingly establishing partnerships with some privileged suppliers which can guarantee the availability of supplies on a week-in, week-out basis. Larger buyers drive consolidation at the supplier level in order to implement scale economies particularly in shipments. The emergence of larger suppliers is the signal that a few selected firms can handle the costs and risks associated with production scattered in many regions or countries over protracted periods. For instance, some Spanish shippers may produce in various Spanish regions, in the Canary islands and in Morocco and benefit from longer production seasons. Managing supply over a long period of time has become a strategic competitive advantage for many shippers.

The above analysis of fruit and vegetables trade shows that three main factors increase competition in the Mediterranean Region:

Demand for fresh fruit and vegetables in the 15 EU countries is quite mature, though varying widely per country. The growth of imports suffers from the slow production pattern changes.

Trade in the Mediterranean Region is more contentious than in areas where production and marketing seasons coincide to a lesser extent. Out-of-season and complementary trade are rather less controversial. Trade in the Mediterranean Basin is often the result of competitiveness differentials between growers of similar products who work during the same period.

The European horticultural sector has increasingly become export-driven owing to market saturation. As income levels rise in developing countries, consumers tend to shift towards diets with heavier intake of animal proteins and fruit and vegetables with expanding possibilities for markets.

IV. The traditional framework of agricultural trade talks

Organisation, rules and arbitration are set at different levels in the complex Mediterranean agricultural markets, especially at national, community and international level. These negotiations take place in an environment of fears to the liberalisation process. Due the above competition trends, the horticultural sector is particularly sensitive. Southern European producers fear that the so called “sensitive” products might be included in the Euro-Mediterranean Free Trade Area. Are their fears justified? In order to answer to this question, it is necessary to assess the weight of labour costs (and of some other production costs) on competition and the impact of trade distorsions (tariffs and preferences) on product flows.

Many european producers do not welcome the establishment of a Euro-Mediterranean Free Trade Area, considering the existing wide differences in labour costs between the EU and NCMC. The proximity to the European markets and the fact that the cost of labour, up to ten times cheaper in the NCMC might lead the idea to regard the Southern Mediterranean area as a natural cropping base for labour-intensive horticultural activities. The Euro-Mediterranean Free Trade Area might lead many global firms to exploit the more favourable regional context established by the EU in the area. However, fruit and vegetables markets are not only governed by labour costs but also differ markedly from each anothers. As indicated above, international competitiveness is also related to the availability of marketing channels, post-harvest and refrigeration technologies and advanced shipping modes. Non-price factors such as product quality, capability to adjust to the rules and standards of advanced markets, prompt delivery and credit terms become increasingly crucial. Therefore, despite a 1 to 6 labour cost ratio, the marketing organisation in the European countries remains an advantage. Marketing costs can easily account for 2/3 of the total value in the retail markets. Hence, labour costs are far from being the deciding factor in the horticultural trade. Additional

contributory factors come into play which are generally well mastered by European traders.

However, this implies that the free market is not an unbearable risk for those producers who have managed to differentiate their products and build on a demand on a regular basis. Quality, technology and services can replace border protectionist measures and ensure stable market shares all the same.

The horticultural market in temperate zones is increasingly saturated, thus making it a "market for buyers" who are rather demanding in terms of quality standards and supply deadlines. Hence, competitiveness is more related to the capability to adjust to the new market conditions rather than to costs and prices. A marked asymmetry has to be acknowledged. On the one hand, there are many producers who are not well organised and who supply limited quantities. On the other hand, demand is relatively concentrated and the number of buyers is small. These trends of the horticultural international market are rather strong and it is unlikely that they will be slowed down by trade barriers.

Hence, the Mediterranean producers of the so called "sensitive" products are faced with structural choices and the regions deprived of enough organisation capabilities to meet the demands of "downstream" operators will be gradually ruled out and replaced. A structural approach to the problem is needed. No easy solution may come from keeping protectionist trade barriers that both the World Trade Organisation (WTO) and the Euro-Mediterranean agreements cannot allow in the long run.

V. The Uruguay Round and the negotiations on the liberalisation of the agricultural trade

The international trade of agricultural and food products has been the traditional case of unremitting price distorsions. The agricultural policies implemented by industrialised countries have introduce some "biases" by

subsidising not only production, but also the exports of the so called "temperate" or "continental" products (cereals, oil seeds and protein crops, milk, meat, etc.). These policies adopted mainly by the United States (*Farm Bill*) and by the European Union (Common Agricultural Policy - CAP) have posed additional budget and deficit strains while contributing to keeping product prices rather low and penalising production against imports in developing countries.

It was within the framework of the GATT's Uruguay Round of Trade Talks that the exception of agriculture, as wanted by the United States after World War II to boost exports, was systematically tackled for the first time. A long debate followed with the Agreements launched in Punta del Este, Uruguay, in 1986, being finalised by the Marrakech agreement in 1996. The talks have not abolished all trade barriers, nor have they eliminated all policy-related distorsions. However, they have brought agricultural trade under the umbrella of the GATT rules - aimed at easing the gradual liberalisation of world commodity trade. Non-tariff barriers have been replaced by bound tariffs and market access strengthened by binding minimum access provisions. Export subsidies have been codified and governed by commodity-specific and volume restrictions. Aids to domestic production, measured by the *Aggregate Measurement of Support* (AMS), have also been subjected to specific sets of rules. Lastly, the agreement on sanitation and plant-control measures has been tailored on internationally accepted rules and recommendations requiring "scientific evidence" prior to any implementations of trade restriction provisions.

Hence, despite the slow liberalisation in agricultural trade, transparency has been introduced and the rules of the "trade game" set.

In order to assess the impact of the liberalisation process, a distinction should be made between industrialised and developing countries. In the former, the level of support has dropped. In 1995 the EU granted approximately ECU 70 billion through PSE (*Producer Subsidy Equivalent*),

though, following the reform initiated in 1992, "only" 68% of these transfers have been in price supports. Budgetary payments (income support, structural support, etc) are expected to increase in the next few years. In advanced countries, domestic budgetary agreements and multilateral negotiations within the WTO should be conducive to a reduction in trade barriers.

In developing countries, the liberalisation process has proved faster than originally expected in the *Uruguay Round* guidelines. In the past ten years, many developing countries, some of which Mediterranean, have implemented unilaterally freer policies within the framework of structural adjustment and macro-economic stabilisation measures regardless of the GATT multilateral agreements. Countries like Jordan or Egypt have initiated negotiations with International Organisations (IMF and the World Bank) in order to reduce their tariffs. A few countries (namely Algeria, Jordan and Lebanon) are currently discussing their membership at the WTO and will have to apply tariff reductions, accordingly. In addition, the vast majority of Mediterranean countries have committed themselves to establishing a Euro-Mediterranean Free Trade Area (EMFTA) within which the mutual liberalisation of agricultural trade will then be discussed.

Negotiations, which are due to start in 1999, will have a greater impact on the agricultural policies of the EU Member States than on Non-Community Mediterranean Members. Community members have already committed themselves, under the *Uruguay Round*, to lowering their export subsidies from US$ 13.274 billion (that is 36.5% of the aggregate value of exports within the reference time period) to US$ 8.496 billion in the year 2000. In the Mediterranean area, only Turkey, Israel and Cyprus have notified export subsidies accounting for 5.6%, 5.2% and 8.6% of total exports respectively.

As to the support provisions to agriculture estimated upon the Aggregate Measure of Support (AMS), despite the CAP reform initiated in

1992 and the Agenda 2000 agreements, the Europeans have agreed upon a total support of US$ 76 billion by the year 2000, that is approximately half the agricultural gross domestic product, whereas Israel, Cyprus, Morocco and Tunisia have committed themselves to reducing support to maximum 10% of farm-gate value production.

An additional asymmetry has been reported in the Mediterranean between exporting countries and net importers of food products. As regards the former, access to markets is expected to improve and prices to increase, whereas, the latter are most likely to experience an increase in import prices and a corresponding impact on trade balances. A reduction in stocks is also expected in the developed countries, which might have implications for market stability should marked adjustments occur between supply and demand as was the case in 1995 and 1996.

The *Uruguay Round* agreements have not affected Mediterranean and "continental" products to the same extent, the former not benefiting from the same supports and exhibiting a different market organisation. However, some products, such as fruit and vegetables remain "sensitive" in the EU and will be subjected to "minimum import price" provisions. In addition, the bilateral agreements between the EU and the NCMC are expected to result in freer regional markets than those envisioned by the multilateral framework.

In Non-Community Mediterranean Countries, the multilateral liberalisation is likely to erode the preferential schemes granted by the Union to some countries pursuant to specific agreements. Given the guidelines set by the Barcelona Declaration and the specificity of the agricultural issue, many Non-Community Mediterranean Countries are balancing the possible developments between the preferential Mediterranean framework and the multilateral market globalisation.

A recent study by Tangermann, shows that had the pre-Uruguay Round preferential agreements remained unchanged, a 17% erosion would

have been recorded in the Mediterranean countries. Israel would have experienced a 27% drop of its margin of preference, Morocco a 13% reduction and Tunisia a 9% decrease. However, following the new Association Agreements, these margins would have been increased by 17% in Israel, by 29% in Morocco (based on the tariffs foreseen for the year 2000) and would have remained unchanged in Tunisia.

Furthermore, agricultural trade is bound to be governed by preferential schemes, but not to become free. Each single country will have to negotiate restrictions on quantities for the so called "sensitive" products and the principle of product coverage. In the long run, the multilateral liberalisation established by the EU is expected to benefit the non-EU producers too. Multilateral liberalisation will involve the dismantling of the existing quantitative restrictions and the most protective devices, such as the entry-price system.

Possible imbalances resulting from the implementation of both negotiation systems are likely to take centre stage in the next few years with European farmers and the CAP coming under a double pressure: from the gradual liberalisation, within the WTO, and from the maintenance of preferential schemes by Member States, namely with respect to Mediterranean products historically exported by NCMC.

The state-of-the art of the Euro-Mediterranean negotiations

In the Barcelona Declaration, 27 Euro-Mediterranean partners (15 EU Member States and 12 Non-Community Mediterranean Countries) agreed on the establishment of a Free Trade Area by the year 2010 through establish the Euro-Mediterranean Association Agreements to be complemented by specific agreements between NCMC. Table I-4 gives an overview of the state of the art.

Table I-4. States of the multilateral Euro-Mediterranean association agreements, June 1998

Partner	Beginning of negotiations	Conclusion of negotiations	Signature of the Agreement	Agreement in force
Algeria	March 1997	Negotiations underway		
Egypt	January 1995	Negotiations underway		
Israel	February 1994	September 1995	November 1995	
Jordan	July 1995	April 1997	November 1997	
Lebanon	November 1995	Negotiations underway		
Morocco	February 1994	November 1995	February 1996	
Palestinian Authority	October 1996	December 1996	February 1997	July 1997
Syria	About to begin			
Tunisia	March 1994	June 1995	July 1995	March 1998

Source: J.M. Alvarez-Coque, 1998

As for Cyprus, Malta and Turkey, their relations to the EU are governed by pre-existing Association Agreements as part of their endeavour to become members of the EU (providing inter alia for the progressive establishment of a customs union in Turkey). The agreements signed with Cyprus and Malta are pre-membership agreements governing their relations to Europe.

These Agreements are not new. They should be regarded as "second generation" arrangements, much more in line with the WTO trade liberalisation rules than the "first generation" agreements signed in 1976-1977. The goal of a Free Trade Area calls for a mutual barrier reduction in the industrial field and a gradual adjustment for farming and fisheries products.

In this process, agricultural trade is an exception to the rule. The total liberalisation of agriculture has never been deemed feasible as it would challenge the CAP provisions, a fact which has often been overtly recognised or indirectly acknowledged during negotiations. Mediterranean countries have benefited from trade preferences in the form of lower import tariffs, with or without restrictions on quantities. Current provisions

tend to freeze existing market shares. All industrial exports already have free access to the European market and duty-free access to those in Turkey, Israel, and Palestinian Authority Territories. Tariff dismantling is still underway in Cyprus, Malta and Tunisia and will be extended to the remaining partners as Association Agreements are enforced.

This is in stark contrast to the rules that govern agricultural products in the plan for a Free Trade Area by the year 2010, as stated in the Barcelona Declaration:

"...choosing traditional trade flows as a starting point and, as far as the various agricultural policies permit it, with due respect for the results achieved within the GATT negotiations, agricultural trade will be progressively liberalised through reciprocal preferential access agreements among the parties ..."

This different treatment of industrial and agricultural products has often been analysed and mentioned as a kind of paradox by NCMC. They are requested to free their markets of manufactured goods and restrain the liberalisation of agricultural products (to comply with the CAP rules). Many NCMC already benefit from a favourable treatment of their exports towards the EU, but concessions on agricultural trade are regarded by these countries as a necessary measure to avert significant short-term adjustment costs.

The short-term impact of free trade on local industries, which have long benefited from protectionist policies, should not be merely anticipated, but also provided for by the various governments. Morocco and Tunisia, the first to sign agreements, estimate that one-third of firms in the affected sectors are competitive enough to survive, whereas another third will have to implement basic restructuring and will require contributions of capital. The remaining third will face liquidation. However, while local industries adjust to the new market laws, consumers risk having, increasingly, to purchase goods imported from the EU. Additional trade imbalances are expected alongside necessary industrial restructuring, which might prove collectively beneficial in the long run, but

which will raise major problems in the short-term, these countries lacking in institutionalised safety nets capable of supporting the firms displaced by competitive pressures.

Nevertheless, the conclusions of the Euro-Mediterranean ad hoc Ministerial Meeting held in Palermo (3-4 June, 1998) recalled the concern expressed by these countries about "*the lengthy national ratification procedures within the EU countries*". They also recognised the need for an agricultural compromise to be reached in order to wind up the negotiations, namely those initiated with Algeria, Egypt, Lebanon and Syria.

The lengthy negotiations and ratification procedures are to some extent the result of the asymmetry in the commercial relations between the EU and the NCMC - with the EU accounting for 55% of NCMC exports and the Third Mediterranean Countries accounting for a mere 8% of total European exports. The combined GDP of the 12 Mediterranean partners is lower than that of Spain alone and corresponds to approximately 20% of that of Germany. The result is self-evident: a ECU 12 billion deficit with regard to the EU in 1994. This asymmetry as well as the regional interdependence call for the implementation of an effective regional scheme which includes agriculture, regardless of the political and economic shortcomings that such a choice might imply.

VI. Regionalism and agriculture

Regional initiatives are crucial in expediting the moves towards freer markets of the partner countries and in strengthening their interdependence and so paving the way to their economic development. Regionalism can help the integration of the various countries into the mainstream of the global economy. This is the role that future negotiations between the EU and the Non-Mediterranean Community Countries are called to play in order to establish the Euro-Mediterranean Free Trade Area in the next 15 years. Regionalism can foster negotiations and revive the international debate. However, the Euro-Mediterranean regional approach is a powerful tool to reduce or smooth out tensions in the area. Therefore, the Euro-

Mediterranean initiative, far from threatening multilateral negotiations, will favour market liberalisation by implementing tariff reductions among partner countries and preparing them for a broader multilateral liberalisation.

Discussions are currently underway about the insertion of agriculture in a free-trade scenario. As far as agricultural products are concerned, the Euro-Mediterranean agreements hinge on a cautious dismantling of customs duties. Compatibility with the GATT rules is based on Article XXIV of the agreement which has never envisaged an entirely free trade in all products between the interested parties for the establishment of a free trade area or a customs union. The text calls for the liberalisation of "most trade", thus leaving space to interpretation. A restrictive regime in agriculture is possible provided that this sector forms part of the talks and measures are taken to implement a gradual true liberalisation.

A gradual liberalisation of the agricultural trade is indeed foreseen in the Barcelona Declaration. Agriculture is a key sector in the debate between partners because it is entrusted with the re-establishment of a balance of commercial opportunities via the increase in both industrial and agricultural exports in the region.

As far as manufactured goods are concerned, free access to the European markets has contributed to increase the share of industrial exports from the Mediterranean countries to the EU from 45% in 1991 to 58% in 1996, thus mirroring the modernisation of their industry. By contrast, EU food imports from the Mediterranean countries have dropped from 50% in the 1960s to 12% in 1994.

The issue of the role of agriculture in the Euro-Mediterranean Free Trade Area is becoming increasingly crucial. A more ambitious role is advocated than that envisioned by the multilateral scenario. Will the agricultural trade game rules in the Mediterranean result from a regional or a multilateral consensus? The answer to the question depends on the speed and the results of two parallel processes: the Euro-Mediterranean Association and the Multilateral negotiations which are due to start in 1999.

Against the background of an incomplete multilateral trade liberalisation, regional agricultural negotiations have become central. If the North American Free Trade Agreement (NAFTA) is taken as an example, no agricultural trade barriers are expected to be left between the United States and Mexico by the year 2005. The same should apply to Latin America, Central America and the Caribbean if the current liberalisation timetables are met.

However, while the Euro-Med initiative is at work to speed up the agricultural trade liberalisation process, two tricky questions remain. To what extent will the market access demands by the Mediterranean countries meet the current EU commercial regime? What impact will the liberalisation of Mediterranean trade have on the most "sensitive" countries, particularly those located in Southern Europe?

Impact of trade concessions on Mediterranean products

Mediterranean countries have historically benefited from trade preferences for agricultural exports towards the EU in the form of tariff reductions with or without restrictions on quantities. Since the early 1970s and under the increasing pressure from preference recipients who feared repercussions from the subsequent EU enlargement, changes have been made in the structure of trade preferences. The enlargement of the Community to Southern countries has reshaped the commercial relations among the Mediterranean partners. The EU Member States such as - Greece, Portugal and Spain - account for 25% of EC fruit and vegetables imports. Following political pressures from French and Italian producers, the conditions for accession to the Common Market have increasingly hardened. In addition, the risk of a trade diversion against exports from Non-Community Mediterranean Countries has led to a revision of the Mediterranean Agreements by the late 1980s. Not to weaken the traditional trade relations with the EC, concessions were granted to the Mediterranean partners which mirrored the tariff reductions granted to Spain and Portugal on a wide range of fruit and vegetables, though often offset by quotas or reference quantities.

Trade concessions to Non-Community Mediterranean Countries are not regarded as a major problem for the European productions of affected products. This was the conclusion of the analysis carried out by the Commission on the impact of agricultural concessions to Third

Mediterranean Countries.[5] Only 3 countries (Israel, Morocco, Turkey,) out of 11 appeared to be large agricultural eporters towards the EU. Broadly speaking, imports from NCMC accounted for a relatively small share of total EU imports and domestic production.

There are some specific reasons for the reported lack of strong correlations between the existence of preferential trade agreements with the EU and the dynamics of agricultural exports from the Non-Community Mediterranean partners towards the EU. First, the net border protection against NCMC is historically lower for products and during seasons in which EC imports do not compete directly with domestic production. Second, the "reference price system" (prior to the implementation of the Uruguay Round Agreement) and the current "entry-price" system (after the Uruguay Round) penalise low-cost supplies of fruit and vegetables. The post-Uruguay Round entry-price system is undoubtedly better than the previous one, as it reflects the tariff preferences of lower selling prices in the EU markets, whereas the reference price system competes with them. In the present system, an exporting country may choose between attracting the preferential margin or selling at a lower price and thus gaining a larger market share.[6] However, the entry-price system still provides higher protection to EU producers, as shown in a number of studies.[7]

[5] See "Mediterranean concession impact study" COM(97) 477 final.

[6] See Tangermann (1996), cited work.

[7] See Swinbank, and Ritson, Op. Cit. In the present system, the "eight per cent rule" applies. The full maximum tariff is charged even if the cif. price is only slightly higher than 8%, below the entry price. As the maximum tariff (confined to the EU plan attached to the Uruguay Round Agreement) is often much higher than eight per cent of the entry price, there is an upward jump in the landed price (including customs duties) whenever the cif price drops below 92 per cent of the entry price.

Table I-5. European Union: supply balance of selected "sensitive" products, 1995-1996

Product	Production (000) Tons	Imports (000) Tons	Share of Imports in Production (%)	Med supplies (000) Tons *(1)*	Share of Med supplies in imports (%)
Tomatoes	12340	483	4	145	30
Processed tomatoes	824	90	11	42	46
Onions	3224	321	10	28	9
Hazelnuts	124	322	260	314	97
Oranges	5238	870	17	364	42
Lemons	1383	191	15	46	24
Table grapes	2394	204	9	32	16
Melons	1750	103	6	31	30
Strawberries	781	30	4	9	31

Source: Eurostat

(1) Imports from Non-Community Mediterranean Countries (Cyprus, Egypt, Israel, Jordan, Lebanon, Malta, Morocco, Syrian Arabic Republic, Tunisia and Turkey).

In addition, where a tariff preference (or entry-price reduction) is granted for a limited quantity in the form of a quota, the preference margin does not lead to a gain in market shares. For some products, tariff reductions apply only to a limited number of seasons and to given quantities. It follows that preference is at best an economic font which benefits the "owner" of the import licences granted for trade in the form of tariff quotas. Hence, exporting countries benefit partially from a protection, but it is difficult to state which part of the additional income corresponds to the preferential margin which flows towards the Mediterranean exporting countries (see Box I-2).

Lastly, trade preferences create favourable export conditions for the products which bring comparative advantages to the beneficiaries. It cannot be excluded whether the tariff margin helps preferential exporters strengthen their market shares in the EU and capture the economic font to the detriment of non-preferred suppliers and European consumers at large. The "new products" are often sold to developing countries by foreign companies, but it is not yet known to what extent preference acts as a catalyst for the growth of market shares. Some additional factors, such as facilities, entrepreneurial skills, investment funds and suitable policy frameworks may prove equally influential for developing a dynamic horticultural sector.

Box I-2. Preference margins under the "entry-price" system.

When imports come in at cif prices below the entry price, a higher tariff is charged beside the standard tariff up to a ceiling established in the EU plan (annexed to the Uruguay Round Agreement). The entry-price system replaces the old minimum-price system (reference price). Considerable reductions in entry prices have been granted to some countries for some products. This enables them to export to the EU even during the high season when the EU market price is lower than the Most Favoured Nation entry price. The reduction in the entry price may be regarded as an incentive to export towards the other signatories of the agreement. Table I-6 below illustrates some cases where entry prices are reduced for given quantities (e.g. Morocco). The limit is 300 thousand tonnes for oranges, and 150,676 tonnes for tomatoes between January and March.

Who benefits from the preferential margins stemming from the reduction in entry prices? These margins are listed in the last column of the table. Where reductions are applied under strict quantity limits, the owners of import licences benefit from the preferential margins. As is the case with some other countries, the EU usually issues these licences under a preferential regime to trading companies registered in the EU. Hence, most of the price advantage resulting from trading companies' accrued preferential margin doe not necessarily correspond to an increase in the partners' exports to the EU. The preferential margins are similar in character to the potential benefits granted to exporting countries, but in practice they may fail to be taken in by these countries or may be diverted to larger market shares.

Table I-6. Entry prices and "MFNT *duty" compared with the entry price in Morocco (Ecu / t), 1995-1996

Product	Entry price	MFNT duty (%)	Entry price + MFNT duty	Entry-price for Moroccan exports	% preference Morocco vs MFNT
Tomatoes					
April	1188	10.6	1314.3	1188	10.6
1 - 15 May	788	10.6	871.8	788	10.6
16 - 31 May	788	17.4	925.1	788	17.4
1 June - 10 July	588	17.4	690.3	588	17.4
11 July - August	588	17.4	690.3	588	17.4
September	588	17.4	690.3	588	17.4
October	688	17.4	807.7	500	61.5
November- 20 December	688	10.6	761.1	500	52.2
21 December -31 December	738	10.6	816.4	500	63.3
January - March	908	10.6	1004.5	500	100.9
Sweet Oranges					
December - March	369	19.3	440.3	275	60.1
April	369	12.6	415.4	275	51.0
1 -15 May	369	5.8	390.4	275	42.0
16 - 31 May	369	3.9	383.3	275	39.4
June - 15 October		3.9			
16 October. - November		19.3			
Clementines					
December - February	648.6	19.3	774.0	500	54.8

* *MFNT: Most Favoured Nation Tariff*
Source: J.M. Alvarez-Coque, 1998

However, as far as fruit and vegetables are concerned, tariff preferences granted to NCMC have in fact limited effects.

Therefore, in spite of the evidence discussed above, European producers feel constantly threatened by Mediterranean competition. European markets for certain products suffer from severe imbalances and in some cases the gradual liberalisation of trade in the Mediterranean area is bound to increase existing market tensions[8]. Some EU regions, primarily in the South, are in direct competition with trade flows from the non-EU Member States, owing to overlapping production and marketing seasons. Problems are more common with products whose seasons are being extended, such as strawberries, tomatoes and citrus. Trade flows of "sensitive" commodities have been restricted by quotas and reference quantities, but imports from the EU have been practically liberalised for specific products such as onion, garlic and potatoes which feature a significant price volatility. In addition, the perishable nature of fresh fruit and vegetables means they have to be marketed over some short time frames. Lastly, trade quotas will stop acting as trade limiting factors as the multilateral process of liberalisation implements the reduction in customs tariffs agreed upon in the Uruguay Round.

The above discussion does not necessarily indicate that a freer trade regime will boost exports from NCMC to the EU. As discussed earlier, Mediterranean products are increasingly affected by non-price variables and structural factors which constitute the present stumbling blocks to the dynamic progress of exports. The farming sector on both sides of the Mediterranean is expected to shift from a "commodity-centred" approach (where price is essential) to a "product-oriented" approach (where production tailors products and services to demand).

[8] See the comment by COPA-COGECA EG(97) 35-CEG(97) 57 - FV/ig, as a reaction to the Commission's "Mediterranean concession impact study" quoted above,

" ... the new food market relies less on prices set in the trading pits of major commodity exchanges and more on private contract negotiations behind closed doors to divide risks and profits among farmers, food processors and retailers. Thus, the transition in the food system raises the question of how the risks and profits of the new market system will be shared among the players from the traditional markets"[9]

However, most international food trade is supported intra-branches exchanges and consists of imports and exports of similar products as opposed to inter-branches trade which exchanges different food products. Mediterranean products are mainly intra-branches traded owing to their widely differentiated range. This form of trade in the food sector has been expanding increasingly throughout the EU in the last few decades indicating that there exists a wide scope for bilateral trade as traditional comparative advantages become less important. The outcome of this scenario are twofold: open trade does not necessarily lead to dramatic inter-sectorial adjustments in many cropping areas and NCMC trade could be faced with the shortcomings of fierce competition - which cannot be overcome through cheap labour costs and favourable climatic conditions.

VII. Future negotiations

Will a co-operative approach to trade be central to future discussions among Mediterranean partners ?

In order to answer this question four key points need to be highlighted first:

Trade liberalisation is not a local issue. It is a global problem and if no regional approach is found, external solutions are likely to be imposed.

[9] Barkema, A. "New Roles and Alliances in the U.S. Food System", in Scherts, L.P. and L.M. Daft, eds. (1994): *Food and Agricultural Markets - The Quiet Revolution*, Economic Research Service, USDA, and Food and Agriculture Committee, National Planning Association report No. 270, pp. 111-112.

Agriculture is only one feature of trade liberalisation and some Southern partners view it as the equivalent of trade talks on industrial products, capitals and services.

Competition for the European markets from Non-Community Mediterranean Countries and EU Member States is a critical issue.

EU Mediterranean countries believe that "continental" production benefits from a better support system within the framework of the Common Agricultural Policy (CAP).

However, the question remains whether trade talks face an impasse or there exists scope for a co-operative approach.

A. The stated "social dumping"

There is a widespread concern among European Union producers, especially from the South, who fear that liberalisation threatens to impoverish farmers in the rich countries as a result of the competition from low-cost labour production systems. Farm lobbies argue that cost of labour is a kind of "social dumping" and advocate a border protection system. The issue was dismissed by the Singapore WTO Ministerial Conference in 1996 on the grounds that labour standards were not on the Organisation agenda, but many industrialised countries still press the case for a regulation of "social standards" within the globalisation process.

The debate over social standards undoubtedly threatens to open a Pandora's box and lead to legitimate protectionism on the grounds of different national policies. Hence, labour legislation would be better tackled by the International Labour Organisation (ILO) which comes under less pressures from the economic lobbies.

Protectionists also claim that in the long run such a fierce competition is likely to destroy job opportunities. International trade economists reply that unemployment is due to market organisation strategies rather than to labour-cost-based competition. The Spanish integration into the Common

Market has shown that complementarity and reallocation of resources occur at a fast pace. Contrary to all expectations, the trade balance of "sensitive" products improved in favour of France when Spain joined the EC.

The issue of different social standards ought to be encompassed in a co-operative approach and should be based on international consensus. The dismantling of tariff and non-tariff trade barriers, the support system and the taxation mechanism should fuel the debate over environmental standards, food security, the protection of intellectual, industrial and commercial property rights and other contributory factors to fair competition. The need for consensus-centred competition rules has been repeatedly acknowledged during Euro-Mediterranean meetings (Barcelona, Valetta and Palermo) and a "regional test" which would permit a rethinking of the rules of the game to be proposed to the WTO.

B. The role of private investment

A further argument against the extension of the Euro-Mediterranean Free Trade Area to agriculture is that competition is biased in NCMC and that the liberalisation of agricultural trade would prove more beneficial to traders than to growers. This is an argument which, however, does not take into account the dynamics that trade integration is expected to engender, mainly via direct investments in the agro-food sector, and which are likely to knock down the existing structures.

Regional prosperity and security are conditional linked economic high growth rates, which in turn depend on foreign investments, the establishment of exporting sectors and the improvement of international competition. The debate over regional liberalisation has accelerated expectations (positive or negative) which are all concurring to accelerate the ongoing transition. The issues at stake are manifold. They range from the eradication of corruption to the implementation of legal and

transparent rules, the adjustment of education systems, the regulation of migration flows and the use of incentives to enhance private initiatives.

It is worth mentioning that the capital flow to the region is appallingly low. According to the World Bank, Middle East and North African Countries account for 1.2% of total direct foreign investments and 3.7% of investments in developing countries. According to IMF and UNCTAD estimates, total private investments from the EU to NCMC and Turkey accounted for US$ 4.7 billion (half of which towards Israel) against US$ 42 (ten folds up) to Japan and China, which is the equivalent amount of investments from North America to Argentina alone (US$ 4.3 billion). Liberalisation agreements and capital flows are strictly related and a co-operative approach to trade is the only way to boost volumes which, in turn, would foster interdependence and iron out mutual reluctance. However, even in the best scenario special provisions would have to be implemented to offset the emergence of less “attractive” areas. The practical and theoretical debate on the effects of structural funds is not only confined to the EU Member States. The fifth report prepared by the Commission on the EU social and economic situation shows that, despite economic boundries between “the core and the periphery” (and the widely varying performances in developing countries) the trend is towards convergence. The report indicates that without the structural funds growth would have been 2.5% weaker in the eligible Spanish regions and 3% less in respectively in Greece and Portugal. The Euro-Mediterranean partnership may prove helpful to this respect, though enhanced solidarity among regions should be fostered as advocated by the EU.

Fostering human capital, the share-out of growth, the environmental issues and a sound sustainable development should be central to a co-operative approach. The MEDA programme illustrated the priorities tailored to the requirements of each country. ECU 4.685 billion will be allocated to this programme for the period 1995 - 1999 (European Council of Cannes).

Box I-3. The MEDA programme

The MEDA programme, the financial arm of the Euro-Mediterranean Partnership, and the EIB, the long-term lending arm, are rather ahead with ECU 1,200 and 1,700 granted in 1995 and 1996 respectively.

The MEDA programme is the main financial instrument of the EU underlying the implementation of the Euro-Mediterranean Partnership. It accounts for ECU 3424.5 million out of the ECU 4,685 million of budgetary funds allocated to financial co-operation between the EU and its Mediterranean partners for the period 1995-1999. These funds are complemented by loans from the European Investment Bank (EIB).

Some 90% of the funds allocated to MEDA are channelled bilaterally to the partners (Algeria, Egypt, Jordan, Morocco, Palestinian Authority, Syria, Tunisia and Turkey). The remaining 10% are designed to assist regional activities. All the partners are eligible for assistance.

MEDA resources are carefully planned: three-year draft plans focus on bilateral channels and a preliminary regional programme covers the vast majority of multilateral activities.

MEDA priorities for funding are the following:

- support for the economic transition to pave the way to the implementation of free trade through improved competitiveness in order to achieve sustainable economic growth, primarily by developing the private sector;
- improvement of the socio-economic balance to reduce the short-term costs of the economic transition through suitable social measures;
- regional co-operation to complement bilateral activities through measures to increase exchanges at the regional level.

Respect for human rights and democratic principles are the mainstays of the co-operation ensured through MEDA.

The following are some examples of projects funded by MEDA since 1996: structural adjustment programmes in Morocco, Jordan and Tunisia; social funds for job creation in Egypt; restructuring of public administration in Lebanon, rural development in Morocco. In 1996, the

EIB granted loans for: water treatment and management in Egypt, Lebanon, Jordan, Gaza Strip and Morocco; measures to abate pollution and upgrade the airport traffic control system in Algeria.

On March 27, 1998 the Commission adopted the MEDA Regional Draft Programme providing the framework for the implementation of multilateral activities (with the joint participation of many Mediterranean partners). During the implementation period (up to 1999) approximately 10% of MEDA financial resources will be allocated to regional activities. The regional draft program complements and strengthens bilateral draft programmes and envisions the implementation of activities in the three domains of the Barcelona Declaration.

C. The European question or the "prisoner's dilemma"

As above mentioned, the main stumbling block to the establishment of the Euro-Mediterranean Free Trade Area which includes agricultural products is the opposition from European producers of fruit and vegetables who do not approve of the so called "continental" products benefiting from a more favourable support system. Only 4.5% of the subsidies allocated by the European Agricultural Guarantee and Guidance Fund (EAGGF) go to horticultural products which account for 16% of the total European output - whereas cereals are provided 40% (and account for 11% of the production). Horticultural producers are requested a disproportionate adjustment effort compared to the support operators in the cereal sector benefit from.

Broadly speaking, the allocation of EAGGF-guarantee payments to Mediterranean products is by far lower than the share of these products in the Gross Value Added Domestic Product of the 12 EU Member States (see Table I-7). A situation which will hardly change within the framework of

Agenda 2000, given the "financial neutrality" advocated by negotiators for Mediterranean products.

Table I-7. Mediterranean crops and EAGGF- guarantee section, 1997

Product	Budget 1997 (000 Ecu's)	% of the budget	% in GVA* EU-12
Durum Wheat	1,103	2.7	1,5
Olive Oil	2,168	5.3	2,9
Fruit and Vegetables	1,679	4.1	18,5
Wine	863	2.1	7,6
Tobacco	1,021	2.5	0,6
Cotton	748	1.8	
Rice	42	0.1	0,4
Total group of product	7,624	18.5	36,7
Total EAGGF- guarantee	41,233	100.0	100,0

** GVA: Gross Value Added*

Source: European Commission (DGVI) and SPEL data base (Eurostat).

However, as Mr. E. Chioccioli[10] recently pointed out, some European countries have an increased interest in both types of production and reportedly we notice the coming up of regional controversy among these countries. Therefore, the regional level is the key to solve the dilemma of the uneven distribution of European subsidies.

However, if we calculate the Producer Subsidy Equivalent (PSE) on a regional base, including the Mediterranean products (wine, olive oil,

[10] CAP Reform, the southern products - Ed. Agricultural Policy Studies, 1998, Belgium, pag. 11-16.

tobacco, cotton, fruit and vegetables) we shall notice that, within the same Southern EU countries such as Spain, PSE per worker is higher in the communities of Navarra, Aragon, Madrid, Castilla-La Mancha, Extremadura, Catalonia and Castilla-Leon, where continental items are produced, than in the less subsidised regions that supply Mediterranean products (Canary islands, Valencia, Murcia). Reportedly, this difference account to 15%. Across Europe, only Corsica (France) and Liguria (Italy) report subsidy levels lower than those recorded in the above mentioned Spanish areas. Hence, among the regions that benefit from the lowest support rate, only two are not located along the Mediterranean coast and one in Western Netherlands. Three Spanish regions are among the 15 European Member States which benefit from the highest subsidies (Cantabria, Asturias and Castilla-Leon).

The regions with the highest rate of protection are mainly EU Northern members. PSE per worker exceeds ECU 24,000 in Denmark, in Belgium, in five German regions, in six French regions and in one Dutch area. PSE exceeds ECU 30,000 in Picardie and Lorraine (France) and in Mecklenburg-Vorpommern (Germany).

By contrast, PSE is less than ECU 5,000 in five Portuguese regions, in ten Greek regions, in six Spanish regions, in three French regions and in eleven Italian regions.

However, this is what in the economic literature is called the "prisoner's dilemma". Producers from Southern Europe are reluctant to play a different economic "game". They ask for the support system to be re-balanced in order to restore equity in the CAP among different regions and producers. But the alternatives are all equally unfeasible. They would consist of either an increase in subsidies to Mediterranean products - impossible given the EU financial constraints - or a reduction in subsidies to continental production (milk, sugar and cereal crops) - which is impossible because of the political constraints it would engender. Hence,

the debate over the Euro-Mediterranean Free Trade area is engulfed in the intra-European context.

The contradiction between North and South could well be summarised in the following quotation in the Financial Times (November 27, 1995):"As to North African countries, Southern European countries tend to stress the need for financial support, knowing that it will be provided by Northern European countries, whereas the latter stress the need for market access, knowing that Southern farmers are bound to suffer the most in competing with North African countries". These diverging positions were ostensibly clear during the signing of Association Agreements with Morocco. Northern countries were willing to grant trade concessions to Morocco, whereas Southern countries insisted on subsidies to attain food self-sufficiency. Northern countries have also urged a reduction in the Euro-Mediterranean partnership funding package proposed by commissioner Manuel Marin (from ECU 5.5 billion to ECU 4.685 billion) arguing in favour of trade concessions and stressing the role of the private sector in providing investment funds.

However, this doctrine of "trade rather than aid" fails miserably when vested interests are involved. The Netherlands, Belgium and Germany expressed last-minute concerns over possible exports of cut flowers, tomatoes and potatoes from Morocco.

European agricultural regional and sectorial interests challenge the plan for a Euro-Mediterranean partnership with its major goals of security and shared prosperity. The future trade talks will have to find a solution to this dilemma.

However, CAP reform and Agenda 2000 will be central to the next European trade talks. The multilateral negotiations which are due to start in 1999 following the agreements signed in Marrakech, the work of WTO and the pressures from trading partners - including the U.S.A. - will call for a radical reform of instruments, goals and subsidy allocation. A debate

which is already mobilising Trade Unions across Europe along with that over public decisions at the Community, national and regional level.

According to experts such as A. Buckwell "*there is a contradiction between the rhetoric surrounding the Agenda 2000 and the proposed regulations*". In spite of a more balanced integration of support payments and environmental and rural development provisions, Agenda 2000 proposals appear somewhat too reluctant to foster a basic CAP reform. The shift from market aids to direct grants and premiums to farmers makes it difficult to overcome the asymmetry in the distribution of subsidies among the various European regions and producers.

The link between multilateral negotiations, where the EU comes under increasing pressure from powerful partners, and the Euro-Mediterranean talks, where the EU enjoys a leading position (because of private and public financial investments, like trade concessions) is bound to become increasingly influential in the next few years. However, NCMC are determined to prevent any rapid erosion of preferences, stressing the role of regional markets and advocating the inclusion of agriculture in the establishment of the Euro-Mediterranean Free Trade Area.

Negotiators will have to acknowledge that not all parties benefit from the liberalisation of trade to the same extent. Any process of integration, and this is one of the lessons of the European experience, has its share of failures and successes. The compensation system is therefore indispensable and the "green box" authorised by the Uruguay Round Agreements is one of the ways agricultural policies may follow. Unfortunately, the richest countries remain a strong attraction for compensation. Hence, the governments of the different Mediterranean regions will have to finalise structural programmes to ensure the successful establishment of the Free Trade Area and the international and regional agencies will have to integrate the goals of the Euro-Mediterranean co-operation programmes

along with those of the support systems to assist the most "sensitive" groups, sectors and regions.

Free markets are not necessarily "competitive" markets and governmental policies (regardless of the leading doctrines on the role of the State in the economy) have to guarantee the establishment of effective markets. Marketing costs are often very high. A reduction in these costs through the improvement of facilities, transportation and marketing strategies should allow a sound and fair competition among the actors, to the benefit of consumers.

All actors in the Mediterranean market should be granted access to information, the very key to equal market opportunities and the only way to join the free trade project and a system governed by market rules. Information systems and their accessibility constitute a common wealth for the Mediterranean, but not the only one. Hence, for a balanced regional partnership to be established, common interests should be similarly provided for in co-operation policies.

VIII. The "common wealth" and co-operation policies

In the agro-environmental food sector, as well as in other sectors of economic and social activity, the globalisation process has highlighted some distorsions in market regulation, which are increased by the growing concern for environmental issues.

The 1992 UN Rio Conference and the work carried out by the International Union for the Conservation of Nature indicated that the need for economically sound sustainable development has come to the forefront in all international and regional agendas. The Mediterranean area follows closely this general trend as the economic and trade activity (mainly in agriculture) is conditional on relatively scarce resources and fragile ecosystems.

As far as water management is concerned, the scenario is bound to become critical in the next two decades and a serious impediment to the evolution of an integrated strategy in the Mediterranean basin. With rain-fed agriculture undergoing a slow development in technical and quantity terms, the increasing withdrawal of water from water-intensive agricultural systems is the only means to meet the growing agricultural output. The increase in the surface of irrigated plots, in the rate of water withdrawn from dams or water tables equipped with pumping stations and the agriculture-related chemical contamination of the water tables, threaten to severely worsen pollution.

Furthermore, the migration of the population to the coastal areas (worsened by seasonal tourism) threatens water supplies and engenders competition between agricultural activities and direct human consumption. This situation which is expected to deteriorate dramatically in the next few decades has not yet been the focus of arbitration procedures which will undoubtedly prove costly and necessary in the long run.

These phenomena have also an enormous impact on biodiversity, on the exploitation of fish resources (mostly sea ones) and the management of forest hazards (degradation, fires, etc.). Sea contamination, the degradation of natural ecosystems (extremely rare in the Mediterranean) and those subject to human agency for agricultural purposes are all issues of major concern.

All the above threats to natural resources make up the environmental side of the “global questions” which need to be tackled at the regional level alongside common concerns over economic and social systems such as quality food security, measures against rural poverty and food supply to marginal and excluded populations.

CHAPTER II

Sectorial and national analyses

I. The Agriculture and the economy

The most important event to recall within the region is the launching in the European Union of the Economic and Monetary Union (EMU) and the introduction of the single currency: the euro. The European single currency will have an enormous impact on the economies of the five Mediterranean EU Member States as well as on all regional economies, being major trading partner. EMU is expected to pave the way for a new era of economic growth in the EU and price stability complemented by careful budgetary planning which should lead to a reduction in interest rates and the promotion of prosperity and job creation.

However, countries which are experiencing a transition to market economy (Albania and former Yugoslavia) economic revival is perceptible. Some of these countries have been riven by factional feuding and wars which have negatively influence both the economy and the society. After a rather overoptimistic assessment of the prospects for democracy and market economy, it is now acknowledged that economic transition will take longer and will be more painful than originally anticipated - except for Slovenia where transition is occurring at a faster pace. For most countries, difficulties remain and progress to market economy is dramatically slow. Financial systems are hardly developed and radical structural reforms are needed to ensure economic prosperity and stability.

In most North African and Middle East countries the growth rate is high, albeit accompanied by an equally high inflation rate. Despite marked improvement in macro-economic stability, trade liberalisation and the establishment of a market-oriented institutional framework during the 1980s and 1990s, some major goals are yet to be achieved, such as basic

reforms, improved economic performances and an equal distribution of benefits. Changes in the economic structures are noticeable and show significant trade and employment sectorial diversification. Exports and tourism are on the rise (tourism has brought about an improvement in trade balances which used to be negative). This progress has been mainly spurred on by the structural adjustment policies initiated in the 1980s. However, some countries are still confronted with recession and imbalances.

II. Recent macro-economic developments in selected Mediterranean countries

Note: this section aims at providing a brief summary of the macro-economic development which has occurred in some Mediterranean countries, namely members of CIHEAM, based on national reports prepared by local correspondents and information available in publications edited by international organisations.

- In *Egypt*, the economy is characterised by a large public sector and strong State intervention. Considerable progress has been made over the past fifteen years to improve the national economy, namely through economic stabilisation and privatisation. The annual growth rate has increased from 4.4% for the period 1980-1992 to 5.3% for 1992-1996 - by far exceeding five-year plan projections. The promotion of a market economy, the attraction of foreign investments, the liberalisation of foreign trade and the upgrading of exports have been the centrepieces of the strategy devised by the Egyptian government. The macro-economic policy has led to a reduction in the inflation rate, the improvement of public finances, the stabilisation of currency and the establishment of a strong banking system and sound balance of payments.

However, the agricultural growth rate which is well below 4% - the minimum rate deemed necessary by the Government to sustain the overall economic growth - is lower than the population growth and cannot ensure

food self-sufficiency. The structure of the Egyptian economy is undoubtedly experiencing far reaching changes. Agriculture is gradually losing its leading role while the service-sector and industry are on the increase - 3.4% against 8.4% and 6.4% respectively. Meanwhile tourism and the diversification of exports have remarkably improved external balances.

- The economy of *Lebanon* is facing the scarcity of basic resources and modest industrial development. Since the 1950s, the service-sector has an up-word role in the economy while agriculture and industry were lagging. The Government has not led an interventionist policy in economic impetus. The country was affected by a serious civil war (1975-1990). During those years of instability, the contribution of agriculture had substantially increased, accounting for 23% of GDP in 1990. It then dropped to 10%, as the economic recovered, .inflation rate is now at 7.8% (1997).

Lebanese economy suffers from an increasing deficit of the trade balance: US$ 1.5 billion in 1988, US $ 5.9 billion in 1994 and US $ 6.8 billion in 1997. By contrast, the balance of payments has shown a continuous surplus since 1993 owing primarily to fund inflows such as remittances and capital deposits from Arab countries. As a consequence the exchange rates are stable or slightly improving. Public finances face a high budgetary deficit and increasing debt (which climbed from US$ 10 billion in 1994 to US$ 16 in 1998).

- *Turkey* is one of the largest countries in the region with a population of 63 million people. The country is rich in land and water resources and includes several agri-climatic regions which help to boost agriculture and product diversity. Since 1980, the macro-economic policy is based on import substitution policies and structural adjustment programmes, funded by the World Bank, aimed at restructuring and opening to external markets through the strengthening of both private sector and market mechanisms. Trade has been enhanced, namely exports of manufactured goods. These reforms have resulted in a significant increase in the growth

rate despite marked annual fluctuations. In 1994, a severe recession induced the fall of more than 6% in GDP. The situation improved rapidly and, between 1995 and 1997, GDP growth rate stabilised around 6-8%.

Inflation and budgetary deficit are high, despite income reforms returns from privatisation policies. Real interest rates rank among the highest in the world and capital volatility poses a constant threat to financial stability - factors which hamper the structural change and the stability of the Turkish economy.

- *Cyprus and Malta* are the smallest countries in the region and exhibit strong economies and high levels of development. They have both applied for full EU membership. Recently, Malta has renewed its application.

Cyprus has a population of 0.75 million people, 0.66 of whom live in the South. The following figures refer to this part of the island. In 1997 agriculture contributed 5% to the GDP, 10% to employment and 21% to exports. The economy is buoyant, unemployment is low, inflation is stable (between 3% and 4%) and so is the currency. The service-sector is the hub of present-day economic growth. The heavy trade benefit is offset by the surplus of the balance of payments.

Malta has 370,000 inhabitants and is the smallest country in the region. Located in the middle of the Mediterranean, Malta enjoys the cultural influence of both sides of the basin. It stands for its trading economy and can be considered a bridge between the North and the South. Economic growth is high (6% in 1997) and the economy is widely diversified. The growth is fuelled by domestic consumption and external demand. Inflation is under control (< 4%). The healthy economy of the country is reflected in its positive trade balance owing mainly to food and beverages re-exports, despite the weakness of the farming sector due to scarce resource endowments. Tourism contributes to the sound balance of payments, thus making the local currency rather appreciated within the basket of the main

European currencies. Food and beverages are, somewhat unexpectedly, among the leading exported items.

- *Algeria* is one of the richest countries as regards natural resources (gas and oil) and by far the largest (2.38 million square kilometres) with a low population (10 inhabitants per square kilometre comparative to 60 in Morocco, in Tunisia and in Egypt). 1997 was the third year of the structural adjustment programme which was due to end in 1998. In 1997 the GDP growth rate was negative owing largely to the slump in international oil prices and the sharp decline in industrial activities.

However, due to economic recession, had social consequences have been hard to coope. The purchasing power of the poorest households significantly dropped from 1989 to 1995 (-38% for wage-earners and -15% for non wage-earners). According to analysts, this was due to the structural adjustment programme advocated by the IMF to attain budgetary equilibrium and inflation reduction.

- *Tunisia* has made significant progress towards industrialisation over the past thirty years and has spurred on substantial growth, albeit insufficient to achieve full employment. Over the 25-year period from 1965 to 1990, GDP increased four times, whereas the population had not quite doubled (GDP per capita has more than doubled). However, in the late 1980s, a dramatic slowdown of the economy was witnessed. A number of indicators showed up the vulnerable nature of an economy featuring high unemployment, heavy debts, declining productivity, inefficient use of resources and social disparities.

Economic performance in 1997 was good with GDP up by 5.6% (compared to 6.9% in 1996 and 2.4% in 1995). The least performing sectors were agriculture, industry and tourism whereas exports and investments were booming. Inflation is stable (4% in 1997 against 6.3% in 1995). Projections for 1998 are favourable with an estimated GDP growth rate of

5.4% due mainly to manufactured goods (non-food industries) and the service sector.

- In the 1980s, *Morocco* witnessed economic growth with an average growth rate of 4.2%. A lower growth rate down to 1.2% was recorded in the 1990s primarily as a result of the poor performance of the agricultural sector. Agricultural GDP dropped dramatically from 6.7% in the 1980s to negative rates in the early 1990s (World Bank data). However, its contribution to the economy is essential: 14% of GDP and 39% of employment. Industry and service-sector have maintained some weak but positive trends. The growth rate variability is striking. Trade has significantly increased its share in the GDP - climbing from 45% in 1980 to 62% in 1995, thanks to the accrued openness of the economy.

- *Slovenia* is the most advanced country of all transition economies in Europe and has been accepted as a candidate for early admission to the EU. Its declaration of independence in 1991 as Yugoslavia broke up did not entail long-lasting conflicts. Also its economic transition has proved relatively easier when compared to other centrally planned economies. Since 1993 GDP has increased over the past few years with an average annual growth rate of 3.5% owing mainly to a soaring external demand (+7.5%) and increased investments (6%) - whereas household consumption improved slightly by 2.3% in 1997. Official unemployment remains high. It increased from 13.9% in 1996 to 14.4% in 1997. Inflation picked up (8.8% in 1996 and 9.4% in 1997). Imports and exports have significantly increased and trade deficit can be deemed marginal. Budget is almost balanced and this has resulted in low interest rates and stable exchange rates.

- *Croatia* is still undergoing to change that have taken place after the break-up of former Yugoslavia. The flow of regional trade has stopped and the burden of 500,000 refugees and displaced persons has led to budget deficits and high inflation.

Measures taken in 1993 and 1994 to stabilise the economy (with the assistance from IMF, the World Bank and EBRD) resulted in modest progress. GDP per capita dropped from US$ 5,100 in 1990 to US$ 2,980 in 1994 due to a significant loss of productivity and hyperinflation. However, privatisation is progressing steadily and the private sector accounted for 55% of the economy in 1997. For two consecutive years GDP growth was strong (4.3% in 1996, 6.5% in 1997), fuelled mainly by growing consumer demand, increased building activity and a revival of tourism. Despite growth, inflation is low and consumer prices increased by just 3.8% in 1997. The trade deficit worsened in 1997 due to an increase in imports. Budgetary policies have remained cautious with a deficit of only 1.5% of GDP. The unemployment rate is alarmingly high.

- After three and a half years of bloodshed (1992-1995) and the enforcement of the internationally brokered peace accords (negotiated in Dayton, Ohio), *Bosnia-Herzegovina* (BH) now consists of two constituent entities: the Federation of Bosnia and Herzegovina and Republika Srpska (RS). Each entity has its own constitution with a President, a government and an assembly. Population dropped from 4.3 million people in 1991 to 2.8 million in 1995, more than 1.2 million people having fled the war-ravaged country. Land resources are poorer when compared with those of Croatia and Serbia, but the country possesses sub-soil, forest and water resources.

Privatisation has *de facto* occurred, albeit to a limited extent both during and after the war. The private sector is currently leading in trade and services but weak in manufacturing. Humanitarian aid continues to flow into the country, though it is proving insufficient to meet long-term needs. A privatisation law has been passed in RS but not in the Federation. However, as most public-sector companies are disappearing or facing heavy losses, there is little prospect for privatisation in both constituent entities in the foreseeable future. In addition, the Republic and the Federation use different currencies, though the adoption of a single

currency is advocated. It follows that, at present, most businesses in the Federation hold their accounts in three currencies. International organisations estimated that employment soared in 1996 as a result of the reconstruction, but is still lower than unemployment (one million people). During the war the country experienced hyperinflation and real incomes were reduced to subsistence level for the vast majority of the population. Wage earners live slightly above the poverty line.

- *Albania* has experienced several dramatic crises in its economic transition towards a market economy and democracy. The latest economic crisis occurred in 1997. The pyramid investment schemes collapsed and Albanians who had invested their savings found themselves destitute. Some major reforms had been initiated in 1991, namely the privatisation of agriculture and a radical land reform. The country started rejoining the international economic system with impressive progress ever since the beginning of the transition. After a steep decline in 1989-92, GDP grew by 10% in 1993 and by 7.4% in 1994. In 1995, the growth rate had climbed to 14.8% (the highest in Europe). Annual average inflation was reduced from 22.5% in 1992 to 22.6% in 1994 and 7.7% in 1995.

This remarkable reversal followed the introduction in mid-1992 of tight monetary, fiscal and structural reforms recommended by the IMF, which included the liberalisation of price and exchange controls, a stricter budgetary discipline, a tightening of money supply and, since 1992, a floating exchange rate. Structural reforms included the privatisation of agricultural lands and of many small and medium-sized state-owned enterprises. Central to the reform plan was the implementation of a welfare system. Following the continuing contraction in the state-owned industrial sector, the agriculture share of GDP increased, but with transition progressing and industrial growth picking up, a retraction is expected.

During the 1997 crisis, most of the macro-economic gains achieved since 1994 were lost and inflation soared back to 40%. The move towards

stabilisation and the help from international institutions sustained the recovery of the currency, but the forced resignation of the Prime Minister in 1998 plunged Albania into its deepest political crisis since the demise of the communist rule in 1991. The economic development brought about by remittances from Albanian émigrés in Greece and Italy and increases in trade and agriculture, which were registering robust two-digit growth, are threatened by political and institutional instability.

- The *European Union* countries of the Northern rim of the Mediterranean (except Greece) are part of the first group of countries participating in the Monetary Union and the adoption of the single currency. Greece, despite the efforts it has been making in the last two years to prepare for the single currency, does not qualify for the first wave of participants under the Maastricht Treaty.

- In F*rance*, GDP bounced to 2.4% in 1997 owing mainly to an increase in industrial production and strong domestic demand. The current trading surplus shows a record of 2.8% GDP. Inflation recorded a all-time low (0.6%) and interest rates stood at 5% in 1998, thus qualifying France for the EU Monetary Union. However, despite the ambitious employment program and the adoption of the 35-hour working week, the country's unemployment rate remains stubbornly high. As for the fiscal deficit, it is less than 3% of GDP.

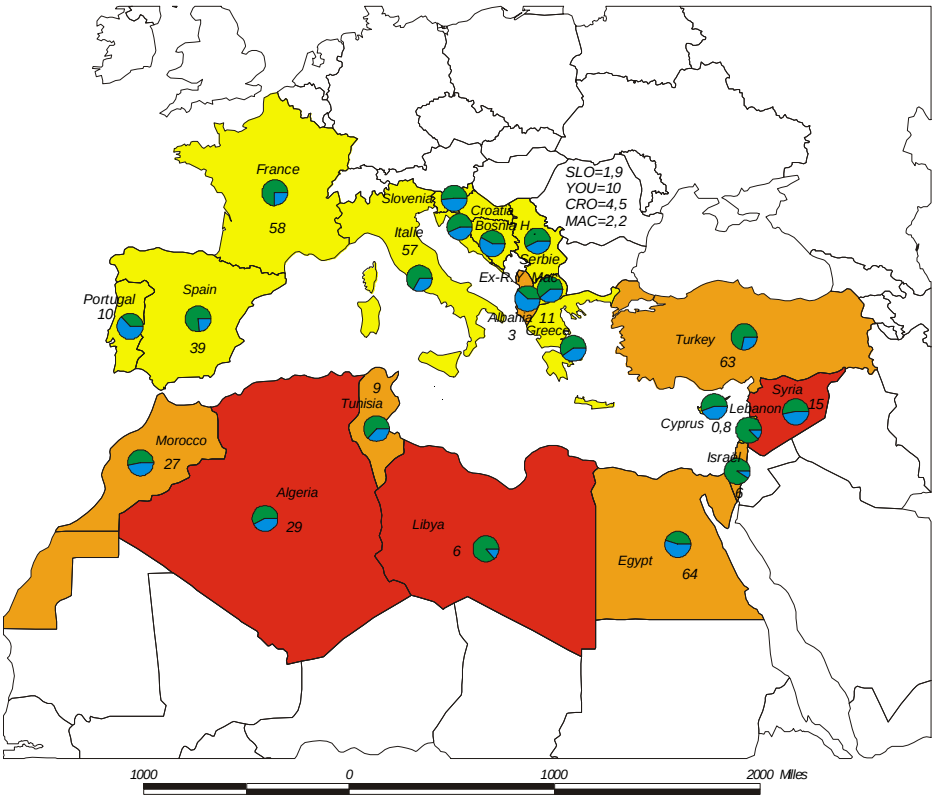
- The *Spanish* economy showed a clear-cut recovery which has reduced unemployment and created new jobs. Economic activity accelerated, with GDP increasing by 2.3% in 1996, and this was fuelled mainly by growing domestic demand. Inflation has remained stable over the past 3 years and interest rate differentials with other European economies are increasingly being bridged.

- *Italy*, spurred on by export demand, experienced an increasing economic growth of 1.5% in 1997 against 0.7% in 1996 spurred. The major achievement in 1997 was the drop in average inflation rate and in the

budget deficit to 1.7% and 2.7% respectively, consistent with Maastricht Treaty criteria. A gradual reduction in interest rates is also reported. Unemployment, though declining, remains high (12.3%).

- In 1997 *Portugal* boasted one of the most improved economies in Europe with a 3.5% GDP growth for the fifth consecutive year. Interest rates have been lowered and inflation has fallen steadily thus enhancing domestic demand by 5.3%. Inflation is now within the EU average and the budget deficit has been trimmed to 2.0%, against the 2.5% government target. Also unemployment is declining thanks to the burgeoning of jobs in the building and farming sector and despite an increase in participation rates. However, the completion of large-scale infrastructure projects is most likely to adversely affect economic activity in the next years. Major private investments are gaining momentum as a result of steadily falling interest rates which, in early 1998, were converging towards those recorded in Germany. Portugal was one of the first countries to meet the Maastricht convergence criteria and its budgetary discipline has been sufficient for it to harbour legitimate ambition to join the single currency in the first wave.

- The *Greek* economy continued its upward course in 1997. Gross domestic product grew by 3.5% (up from 2.6% in 1996). The alarmingly increased trade deficit urged a realignment of the exchange rate in March 1998 with a 12% devaluation of the national currency as a result of the agreement on the central rate. Inflation fell to a 25-year low (< 4.5%) but showed strong resistance to further decline, partly as a result of the exchange rate alignment. Greece continued, however, to be plagued by a large trade deficit in 1997 (up to 4% of GDP) owing mainly to the monetary and exchange rate policy that has kept a strong currency as a means of fighting inflation. Budget deficit fell, albeit to a still-high 3%. Macro-economic aggregates improved in 1997, but additional efforts and structural reforms in the public sector are still needed.



Legend

Source: F. Lerin

urban population

rural population

ex: 64 = total population of Egypt (millions)

0 - 1.35

1.35 - 2.7

2.7 - 4.05

population growth rate

Map II-1. Populations in the Mediterranean Basin (World Bank data, 1994)

The agricultural situation

Despite the great regional diversity of agricultural systems (importance in the economy, natural and credit resources, domestic policies, etc.) some common trends can be highlighted. In those countries where agricultural contribution to GDP and employment is low, the forces which guide the progress of agriculture and agri-food systems persist, thus resulting in a slow growth of food consumption and productivity. The increasingly liberal regulation framework which has been implemented is expected to slow down production and focus economic interventions on income support and assistance to local rural development.

Conversely, in developing countries, where the contribution of agriculture to GDP is significant, moves towards agricultural growth are witnessed, namely in countries with a rapidly growing population. However, in these countries (in North Africa and the Middle East) agricultural development is hampered by the scarcity of available arable land and water resources which makes it difficult to enhance both supply and demand. Hence, the agricultural trade balance tends to worsen with a decisive bearing on economic performance and social life. Most countries have launched far-reaching projects to develop land and water resources - which require significant investment funds from government budgets - with a view to boosting productivity and providing income for the growing rural population.

It is noteworthy to recall that also present-day available resources are threatened. The already scarce amount of arable lands in Northern African countries is confronted with desert advancement and over-cultivation which have led to a massive exodus towards the cities.

Lands are also threatened by erosion and degradation. Desertification and over-exploitation of dry soils, mainly along the southern coast, are critical issues. However, recent studies have shown that the extent of the area under desertification had been largely overestimated. Though the

impact of human agency-related desertification has not been elucidated yet, there is little doubt that soil nutrient mining and over-cultivation in fragile soils do result in dry land degradation and desertification. Hence, a sustainable use of resources and conservation of soil and land resources are two major challenges facing Mediterranean agriculture, primarily in the countries of the southern rim.

Additional threats to land are posed by the rapidly increasing population and economic growth which contribute to further diversion of agricultural land to other uses such as human settlements and infrastructures. Recent developments in the system of oases in the south of Tunisia confirm this trend. Water availability and quality constitute serious constraints for Mediterranean farmers. Pure water is becoming increasingly rare (Table II-1). Agriculture remains the main water user: 79% of water being withdrawn for agriculture in developing countries against only 49% in advanced countries.

Water resources for agricultural use suffer also from severe quality problems that pose a threat to human and animal health. The major issues relating to agriculture are rising salinity, nitrogen and pesticide residues in surface and ground water and the discharge of organic effluents from intensive animal breeding. The combined effect of population and economic growth as well as urbanisation are problems brewing for the future for already water-stressed countries. In order to address these problems, most countries in the region are investing in huge water development projects, such as dams and river diversion works to increase water availability for irrigation. However, these efforts are not sustainable as groundwater supply is limited and not renewable.

Table II-1. Annual renewable fresh water available per person in selected Mediterranean countries

(m^3/cap/year)

	1955	1995	2025
Albania	15120	6462	4711
Algeria	1770	689	332
Cyprus	1698	1282	996
Egypt	2561	1123	630
France	4260	3262	3044
F. Yugoslavia	15126	11130	10161
Greece	7406	5825	5840
Italy	3845	3243	3325
Lebanon	3088	1816	1113
Malta	96	85	69
Morocco	2763	1117	590
Portugal	7665	6688	6519
Spain	3801	2844	2733
Syria	6500	2087	732
Tunisia	1127	540	324
Turkey	8509	3626	2186

Source: Hamdy and Lacirignola, (1995)

Utilisation of Water in the Mediterranean: Sectorial Distribution and Prospects in: Water Management in the Mediterranean Area, Options Méditerranéennes, Série A, n° 31, p. 28.

III. The agricultural situation in selected Mediterranean countries

In *Egypt* the contribution of agriculture to the economy dropped dramatically by 28% of GDP in the 1970s to 18% in the 1980s and then stood steadily at 20% in 1995. Including food industry, the agri-food sector

contributes 40% to GDP and 50% to the employment. From 1981 to 1992, the average annual growth of agriculture amounted to 2% a year. Agricultural employment declined from 53% in the early 1970s to 38% in the late 1980s.

Agricultural growth increased slightly from 3.1% in 1996 to 3.4% in 1997. The agricultural reforms (price policies, abolition of quotas and controls on cropping patterns) initiated in the late 1980s have had a growing impact on agricultural output. Cultivated areas were extended between 1991 and 1997 and a major shift was recorded towards wheat and cash crops (sugar beet, peanuts, sesame).

The processing industry plays an influential role in the economy, especially cotton ginning, spinning and weaving. A decisive increase was reported between 1991 and 1997 in cotton processing as well as in rice milling and fertiliser production. Stumbling blocks to progress remain the limited available land per inhabitant (which recorded a slump from 0.2 ha in 1927 to 0.1ha in 1960 and 0.05 ha in 1990) and the rapid population growth. Therefore, despite the efforts aimed at boosting and re-targeting production, imports are on the rise and food self-sufficiency remains a major concern.

Egypt started to address this long-term concern in the 1950s by launching a land reclamation policy. The programme which has come to be known as the “New Lands” programme, as opposed to the “Old Lands” plan implemented in the Nile Valley, has reclaimed some 740,000 ha between 1952 and 1992, thus bringing the total arable land surface to 3.2 million hectares and the share of cultivated land to 6.1 million ha (mainly as a result of double or triple yearly cropping). Despite the climbing food demand, most lands are traditionally allocated to cash crops, in particular cotton, which bring in the much sought after foreign currencies. Livestock production, especially for meat and milk, is equally important and accounts

for one-third of total agricultural production. Crop production represents 64% of the total.

State intervention, though shrinking significantly, still has a decisive bearing with most of cotton and rice processing and fertiliser production under the public sector umbrella.

In *Lebanon*, though the economy is quite diversified, agriculture continues to play a leading role contributing 9% to employment and 10% to GDP. Crop output accounts for two-thirds of total agricultural production. Agriculture represented 34% of total exports and 25% of imports in 1990 and only 14% and 9% respectively in 1997. The agricultural trade deficit amounts to US$ 0.59 billion in 1997, approximately 9% of total trade deficit. Crop production systems are mainly focused on cereals, fruit and vegetables; livestock include sheep, goats, cattle and poultry. Food processing, namely of alcoholic beverages, bottled water, non-alcoholic beverages, canned food, juices and poultry products plays an undisputed part in the economy,

In *Turkey,* agriculture has historically played an influential role in the economic development of the country. As late as 1998, agriculture contributed 22% to GDP and 50% to employment. However, over the past ten years, a dramatic slump has been recorded. Agriculture contribution to GDP has dropped to 16% and is expected to fall to 15% by the year 2000. Also agriculture contribution to employment has declined to 43%. Unlike the vast majority of Mediterranean countries, Turkey features a surplus agricultural trade balance and, due to its wide range of agro-ecological regions, it produces a variety of agricultural products, some of which are exported. Agriculture-related exports accounted for 8.8% of total exports in 1997 and imports represented less than 10% (the above figures are higher when food-processing products are included). Agricultural growth is unstable. The only two years with positive growth rates since 1993 are 1996 (+4.4%)and 1995 (+2.0%), the remainder being negative. In 1997 agriculture

experienced a decrease (-2.8%) whereas industry was growing (9.5%) as was the service-sector (7%) and total GDP amounted to 6.3%.

Nevertheless, agriculture remains the pillar of the Turkish economy. It is a major contributor to GDP and a provider of employment for the rapidly growing population (1.7% per year) mostly in the rural districts. There are approximately 4 million farms scattered throughout the country, most of which are small. More than half the farms cover less than 5 ha and about 80 per cent less than 10 ha.

In *Cyprus*, agriculture contributed 5% to GDP in 1997, less than 10% to employment and 21% to exports. The country suffers from a scarcity of water and land resources. The crop sector accounted for approximately 65% of gross output in 1996. Despite its long tradition of food self-sufficiency, the country saw its position eroded in the late 1980s. In recent years, imports of both raw and processed agricultural products have exceeded exports giving rise to a self-sufficiency gap in 1997 (21% of gross agricultural output). 1997 was an extraordinarily hard year. In normal years raw agricultural exports are generally in balance with imports, while there is usually a net deficit in the overall processed food trade.

In *Algeria*, agriculture contribution was to 10% to GDP in 1980, and reached 16% in 1997. With reference to employment, agriculture contribution has remained stable since 1991 (approximately 24%). The average annual growth rate of agricultural employment was 2.9% (against the total employment rate of 3.4%) for the period 1992-1997. These developments are largely due to the high population growth (+2.87% from 1965 to 1997, the highest in the region).

Food production has increased by 62% over the period 1986-1996 (+71% for crop output and +53% for animal production). Agriculture and food contribution to the total exports increased by 28.6% in 1996 and by 29.9% in 1997 whereas exports declined from 1% in 1996 to 0.3% in 1997. Cereals and related products constitute the main items of food imports.

They climbed from 38% in 1994 to 48.8% in 1997 of the overall agricultural share. Agricultural annual growth rate for the same period amounted to 5%. Overall, trade declined as per cent of GDP from 65% in 1980 to 57% in 1995, as a result of the stagnation of the economy from 1980 to 1995.

In *Morocco*, agriculture contribution to GDP dropped dramatically from 18% in 1980 to 15% in the early 1990s and to 14% in 1997 owing largely to high GDP growth rates during the 1980s (+4.2%) which declined in the 1990s (1.2%). This slump is partly attributable to the definitely negative agricultural growth rates. Economic recession affected the contribution of agriculture to employment, which declined from 56% in 1980 to 45% in 1990. The share of trade bounced from 45% in 1980 to 62% in 1995, as a result of a sensitively open economic policy.

In *Tunisia*, agriculture contribution to GDP declined to 14% in 1980 and then to 12% in 1995. It increased to 14.5% in 1996 and to 14.2 in 1997. Estimates for 1998 amount to 13.5%. As for the agriculture contribution to employment, it accounted for 22.6% in 1996 against 28% in 1990 and 39% in 1980. The country features also a rapid population growth rate (averaging 2.21% for the period 1965-1997 and 1.9% between 1990 and 1995). Agricultural trade balance improved in 1996 and 1997 with exports and imports climbing from 58% in 1996 to 88% in 1997 and expected to exceed 90% in 1998.

In *Slovenia*, the importance of agriculture is relatively low. Following a dramatic drop in the early years of the transition stage, agricultural products have been rising since 1994. In 1997, a slight 0.3% increase was recorded, owing mainly to the remarkable growth in animal production (3.6%), while crop output decreased (-2.9%).

The agri-food sector contributed 9.2% to employment in 1997 whereas agriculture alone contributed 6.2% (against 7.8% in 1992). An annual 0.2% decline is expected in 1998 and 1999. Part-time agriculture and small-sized farms are prevailing. Only 20% of farm households derive their income

from agriculture alone. Agriculture share of GDP is equally small (4.4% in 1997), albeit stable since 1993. The agri-food sector contributed 4.6% to GDP and 3% to employment, but capacity is exploited to a limited extent. The food industry accounts for 10% of total manufactured goods. The share of agri-food commodities in total trade is declining. Agricultural prices have increased by 6.7% whereas consumer prices have increased by 9.1%.

In *Croatia,* agriculture contribution to GDP increased in the early years of transition mainly as a result of the contraction of the economy. However, since 1992, the contribution of agriculture to GDP has continued its downward course from 14.5% to 9% in 1997 (57% for livestock and 43% for crops). Also the contribution of agriculture to employment dropped dramatically from 16% in 1991 to 11% in 1997, indicating the sector's increasing productivity. The contribution to trade (imports and exports) varies. It ranged between 11% and 12% from 1992 to 1996. The country features good land resources and high productivity when compared to the other countries of former Yugoslavia. Gross agricultural output increased in 1997 (2.1%) for the fourth consecutive year. Agricultural output had dropped dramatically in the early 1990s with the slump affecting mainly cereals and livestock in large farms.

Agricultural prices are generally high, mainly for livestock products, equalling in some cases those in the EU. The significant border protection isolates the domestic market with respect to some commodities. The high level of farm debt and limited credit access have severe repercussions on the whole food chain.

In *Bosnia*, land resources are scarce. The vast majority of the country is forested and too mountainous to be easily farmed. Hence, the major crops (wheat and maize) are only 30-40% of the output of Croatia which has similar land area and population size. Livestock numbers for cattle, sheep and poultry are relatively high, though lower than in Croatia in absolute terms. Agricultural production suffered from a sharp decline after 1991 due

to the economic transition underway and the war (1992-1995). Small farms continued to operate but humanitarian aid constituted the main source of food. The economic paralysis continued in 1996 and 1997, despite a slight improvement after the Dayton Peace Agreement. Inputs remain in short supply and machinery is in poor condition.

Albania is basically agriculture-oriented and most of its population lives in rural areas. In the pre-reform years, farming accounted for about 20% of exports and 50% of employment. Following the launching of the reform, industrial recession resulted in an increase in agriculture contribution to both GDP and employment. The share of agriculture in GDP was estimated at 56% in 1997 compared to 52.3% in 1996 and 32% in 1989 respectively. Over 50% of the labour force work in the farming sector. Most agricultural activity struggles to maintain subsistence owing to small-scale farms and the lack of alternative income-generating activities in the rural districts. Following the land reform, more than 460,000 medium-sized farms of 1.5 ha each sprouted across the country.

Albania has abundant land and water resources, but the high population density calls for intensive cultivation. The most important field crops are wheat and maize. Irrigation systems cover approximately 60% of arable lands and double cropping is widespread in 20% of lands. Agricultural trade accounts for 12% of imports and one-fifth of exports - 50% of which consist of tobacco and tobacco by-products, the export of fresh fruit having virtually stopped in 1991.

Farming is experiencing a move towards liberalisation which is proving favourable to the reallocation of production factors. The revival of exports and the limits imposed on imports should pave the way for improved domestic distribution channels and increased product quality and standardisation.

In the *EU countries* of the north Mediterranean rim (*France, Greece, Italy, Portugal, Spain*), agriculture, although remaining important for the

economy, its contribution to GDP and employment is low and rapidly declining. The table II-2 summarises the general features of the agricultural sector in 1996 in the above listed countries.

Table II-2. Some general characteristics of the EU agricultural sector, 1996

	%GDP	% pop.	Trade balance Mio US$	% imports	% exports
France	2	3.9	+12,783	9.4	13.3
Greece	7	14.9	- 210	14.4	32.5
Italy	3	6.1	- 8,682	12.4	6.7
Portugal	3	15.8	- 2,828	12.6	6.3
Spain	3	8.7	+ 1,804	10.8	14.6

Source: Medagri, 1999

Despite the over-capacity of agricultural production in the EU, agricultural balances in the Mediterranean EU countries are positive only in France and Spain and negative in the remaining countries. An increased output is a widely shared goal. Production improvement is not expected to contrast with economic policy objectives, provided it is based on higher productivity and lower price support levels. Increased production efficiency should entail higher farm incomes, lower consumer prices and macro-economic benefits.

IV. Trends in agricultural production, food consumption and trade

A. Agricultural production and food processing

Agricultural production varies widely in the Mediterranean countries according to latitude, climate, social and institutional disparities. Typical Mediterranean products are: olive oil, palm dates, wine and ewe's milk for which the region ranks high at the world level. Cereals are equally

important - accounting for 10% of the output - along with vegetables (16%), milk (13%) and meat (10%).

Within the region, agricultural production is mainly concentrated along the Northern rim of the Mediterranean, except for some specialised crops, as a result of more favourable climatic conditions and a more advanced agricultural and economic development. North Mediterranean countries, specially the EU Member States, account for almost 80% of cereals, 65% of vegetables, 75% of fruit and 81% of meat produced in the whole region.

As to cereals, in 1997, France was the largest regional producer with 63 million tonnes (that is 38% of the overall regional production), followed by Turkey with 29.6% MT (18%), Italy and Spain with little more than 19 MT (12%), Egypt (10%), Morocco and Greece (3%). Fruit crops are widely distributed in the Mediterranean basin.

Italy with 15.1 MT is the first producer (19% of total production), followed by Spain (14 MT, i.e 18%), France (13%), Turkey (12%), Egypt (7%), Greece (5%), Morocco (3%), Algeria, Israel, Yugoslavia and Portugal (1%).

As to citrus, Spain is the leading producer with 5 MT, that is 30% of the overall Mediterranean production, followed by Italy (3.2 MT, 19%), Egypt (13%), Turkey (8%), Morocco and Greece (7%).

Vegetable production is much more concentrated. The six largest producing countries account for almost 70% of the Mediterranean production: Turkey (21 MT, 22%), followed by Italy (14 MT, 14%), Egypt (12%), Spain (11%), France (8%), Greece (4%) and Morocco (3%).

Livestock production is highly concentrated in three North Mediterranean countries: France, Italy, Spain and, to a lesser extent, Turkey. In Southern countries, however, cattle stock is increasing, thanks largely to incentives to intensive breeding of imported milking breeds.

Some major impediments undoubtedly stand out, such as the unfavourable climate and the need to feed cattle with concentrate feed and irrigated fodder which are scarce in South Mediterranean countries owing to the strong competition of other crops. Goat and sheep breeding, relatively widespread across the Mediterranean region, does not increase in numbers but has progressed towards more advanced organisation and production strategies. In the North Mediterranean countries (France and Italy), large and intensive animal breeding are being established to produce milk and typical cheese products. In the South, where cattle is bred mainly for meat production, herds are larger in size and nomadic type breeding is reduced through a more intensive exploitation of the areas, even the most distant ones, and herds transportation is made by truck. This results in overgrazing and competition with cereal production.

Tobacco, cotton, sugar beet and cane sugar are crucial crops, even though they vary in importance in Mediterranean economies. These products, often blamed for diverting resources from staple crops, constitute a considerable source of income for farmers.

As far as Maghreb is concerned, 1997 was a hard year for farming because of adverse climatic conditions, namely drought which dramatically affected yields (cereals in particular). Cereal production (wheat and barley) dropped by 60% in Tunisia and Morocco and by 80% in Algeria. Yields declined by 30-40% - they amounted to just 10-15 quintals per hectare for wheat. Wheat growing areas have undergone to a sharp decrease. Conversely, yield and overall output had been extraordinarily high in 1996 (10 MT in Morocco, 4.6 in Algeria and 2.6 in Tunisia).

Similarly, a marked reduction interested both yield and cultivated areas of vegetables, such as tomatoes and potatoes. In Morocco, the production of tomatoes and onions accounted for 56% of the aggregate output of vegetables which decreased from 800,000 tonnes in 1996 to

508,000 in 1997. In Tunisia, during the same period, production dropped from 700,000 tonnes to 500,000.

Crops and produces such as: olives and olive oil (in Tunisia an increase was recorded from 60,000 tonnes in 1996 to 310,000 in 1997) and palm dates (from 74,000 tonnes to 85,000 again in Tunisia) show increases in production levels.

Box II-1 - Olive oil: an expanding market

According to production data from the Olive Oil International Council, world olive oil production in the yearly base 1996-1997 reached a record of 2,635,500 tonnes, thus exceeding the output of the 1991-1992 by 2,205,000 tonnes. As to the 1997-1998, production is estimated to be high at 2,446,000 tonnes, though slightly lower than that of the previous year.
This trend is mainly due to the EU, whose production is expected to exceed 2.1 MT in 1997-1998, and reportedly 50% of which should originate from Spain, which has doubled its production over the last decade (0.947 MT for the 1996-1997). A slight increase was also recorded in Greece during the same period where production is currently running at more than 400,000 tonnes. Italy has maintained a rather stable output, ranging between 400,000 and 600,000 tonnes, depending also to the reference years.
Good performances are being recorded in Tunisia and Morocco where production is increasing. Tunisia due to a renewed planted area reached a record olive oil output of about 300,000 tonnes in 1996-1997. Also Turkey produced more than 200,000 tonnes that same year, but its production appears stable in the long run. The relative buoyant production has resulted in a dramatic price drop and also increased consumption. Consumption accounted to 2,170,500 tonnes in 1996-1997 and to 2,227,500 in 1997-1998, an average exceeding by 20% that recorded in the early 1990s. This upward consumption trend appears constant in the long run, albeit slower than production. The increased supply has fostered exports which have exceeded 400,000 tonnes over the past ten years, excluding intra-Community trade. The major importing countries are the United States, Japan, Canada and Australia.

During the last decade, the EU has doubled its imports from non-Member countries, reaching 150,000 tonnes, and this accounts for one-fourth of the world trade (including intra-Community trade). Tunisia is the major EU supplier (60 to 70% of non-EU imports), followed by Turkey with 20%. The EU is also a leading exporter. In 1996-1997, it exported 220,000 tonnes with Italy and Spain carving for themselves the largest share, followed by Tunisia with 115,000 tonnes, Turkey with 40,000 tonnes and Morocco with 35,000 tonnes.

Given the favourable climatic conditions, the start-up of brand new plants and the upgrading of production techniques, the world market appears to be entering a fresh era of growth which might engender a surplus of supply, not only owing to cyclical phenomena but also as a result of far-reaching structural changes.

A contribution to market regulation, mainly as regards the domestic market, came with the introduction of the EU Regulation (N° 1638/98) following the approval of a transition reform suggested by the Olive Oil Common Market Organisation. It is a transitional regime scheduled to last till 2001 and includes provisions intended to prevent production surpluses and improve support policy management. The centrepieces of this regulation are: the maintenance, though reduced by about 6%, of aid to production paid according to current production; the revision of intervention regimes; the removal of flat-rate aid to small farmers; the increase in the maximum guaranteed quantity (1,562,400 tonnes) and its breakdown in National reference quotas; the strengthening of promotion campaigns to enhance olive oil consumption; the suppression of consumer subsidies and the partial redefinition of virgin oil categories.

In Morocco, minor fruits such as musk melon account for an important share of the growth in fruit production, whereas olive and citrus outputs are declining. In 1997, olive production equalled 517,000 tonnes against 835,000 in 1996 and citrus production amounted to 1,194 MT against 1.4 MT in 1996.

Table II-3. Agricultural production in Algeria

(000 tons)

	1994	1995	1996	1997
Cereals	963	2138	4600	869
Wheat	714	1511	2800	661
Barley	234	582	1690	191
Vegetable	2571	3200	3147	3009
Potato	716	1200	1150	947
Processed Tomato	449	554	437	359
Citrus	376	323	334	350
Stone Fruits	250	286	373	290
Olive oil 000 (hl)	20	24,7	16,3	51
Preserved olives	19,7	14	34,5	42
Red meat	295	300	309	248
White meat	219	190	93	105
Milk	1057	1050	1100	1050
Fish	135	106	116	93

Source: National Statistical Bureau (NSB) and Ministry of Agriculture, Algiers, 1998

Table II-4. Agricultural production in Morocco

	1996			1997		
	Surface 000 ha	Yield tons/ha	Production (000) tons	Surface 000 ha	Yield tons/ha	Production (000) tons
Cereals	5981	1.69	10932	4905	0.83	4086
Wheat	3211	1.84	5915	2493	0.92	2316
Barley	2430	1.58	3831	1996	0.66	1324
Maize	253	0.93	235	340	1.1	374
Pulses	312	0.88	273	362	0.6	213
Sugar beet	56.7	48.5	2749	63	41.5	2612
Sugar cane	14.3	62.8	899	11.1	66.9	742
Oil seeds	108.9	1.19	129	135.3	0.85	115
Vegetable	235	19.7	4634	234	18.8	4403
Potato	65.6	19	1249	66.4	17.8	1186
Tomato	22	40.1	882	18.4	43.3	804
Fruits	736		2584	753		2899
Citrus	73		1400	73		1194
Olive	418		835	426		517

Source: Ministry of Agriculture, rural development and fisheries, Rabat, 1998

Table II-5. Cultivated surface area of the main crops in Egypt

(000 Feddan) *(1)*

	1991	1992	1993	1994	1995	1996	1997
Wheat	2215	2092	2171	2111	2512	2421	2500
Barley	145	248	144	148	448	106	225
Bean	326	425	297	374	320	361	370
Clover	2519	2542	2615	2686	2430	2504	2574
Vegetable	940	918	991	1012	1056	1158	1660
Cotton	851	840	884	721	710	921	921
Sugar cane	263	267	271	278	301	306	265
Rice	1101	1216	1283	1379	1401	1407	1431
Maize	2068	1967	1973	2057	2133	2086	2086
Fruit crops	896	907	912	940	954	900	900

Source: Statistical Year Book, CAPMAS, 1997

(1) 1 Feddan = 0.6 ha

Unlike fruit and vegetables which are irrigated, non-irrigated crops (cereals, oil seeds and protein crops) exhibit widely varying yields. In Maghreb, as well as in most Southern Mediterranean countries, cereal planted areas, covering on average half the arable land, are subject to crop rotations in order to save water resources and enhance soil fertility. Any increase in the production rate is generally conditional on rising yields, which are still low, improved production techniques, use of selected seeds, sound application of fertilisers and pesticides and a more effective management of water resources.

Livestock production in Algeria accounts for 50% of agricultural production and plays a major role, mostly in range-lands and in some poor southern regions, whereas in Morocco and Tunisia, it represents only 30% of the total agricultural activity. As a whole, the production remained stable over the past two years in both Tunisia and Algeria and increased in Morocco mainly as a result of the drought which caused an increased slaughtering of stock heads to face the reduction in available fodder.

Meat production is essential, not only in Maghreb but also in South Mediterranean countries. It is a strategic social and economic means and helps ensure food security in the region. This is the reason why all Mediterranean countries have boosted meat production applying animal husbandry techniques suited to the varying local conditions, as well as animal breeding strategies and new technologies. These actions which have been partly undertaken over the past years have stemmed from a closer collaboration between Northern and Southern Mediterranean countries focusing on vocational training and transfer of know-how.

In *Lebanon,* according to the estimates provided by the latest census by the Ministry of Agriculture, production revival is hinged on the production of:

- vegetables, specially under greenhouse;
- relatively high yielding potatoes;
- industrial crops such as sugar beet and tobacco which since 1991 are subsidised by the government;

- olive trees mainly following the launching of the 1994 UNDP/FAO project to improve olive production.

Great importance is attached to fruit production which in 1997 accounted for 64% of cultivated lands. Recent estimates based on the 1997 census by the Ministry of Agriculture reflect some deep changes: fruit-grown areas account for 47% of the total actually cultivated land (17% of which are devoted to olive trees), cereals represent 19%, vegetables and tubers 15% and industrial crops 6%.

Animal husbandry in Lebanon depends largely on sheep, goats, cattle and poultry. Cattle breeding has decreased over the past two decades owing mostly to the reduction in grazing lands. The drop has dramatically affected cow number which declined from 80,000 in 1994 to 56,000 in 1997. On the other hand, the total number of small ruminants has slightly increased in recent years with a general reduction in the number of goats (494,000 heads) and an increase in that of sheep (322,000).

Over the past years, Egypt has experienced a remarkable agricultural growth, thanks namely to a tailored programme of economic and agricultural reforms - aimed at rescuing arable lands from pending desertification and improving the management of the Nile water and groundwater resources - supplemented by the gradual introduction of new technologies. The major crops in the country are: cotton, maize, rice, sugar cane, fruit and vegetables.

Except for protein crops and soybean, crop surfaces and yields are decidedly on the rise. Between 1992 and 1996, wheat production increased by 24% reaching 6 million tonnes; sugar beet (+13%) equalled 842,000 tonnes; vegetables (+33%) amounted to 12.2 million tonnes; sesame (+25%) bounced to 49,000 tonnes; peanuts (+31%) grew to 147,000 tonnes; sugar cane (+21%) recorded 14.2 million tonnes; rice (+25%) represented 5.1 million tonnes and maize increased by 14%. Cotton with 900,000 tonnes in 1996 decreased as a result of unexpected harmful diseases. All the above

performances are generally attributed to the economic reforms discussed earlier.

Box II-2 - Rice production in the Mediterranean

With a production of approximately 570,000 million tonnes of paddy rice, 30 million of which for international trade, rice is one of the key cereals in the world. The increasing production over the last fifteen years in the major production regions does not seem to affect international trade as demand follows closely the production trend.

The share of Mediterranean production is undoubtedly marginal when compared to world-wide output (9 million tonnes in 1997). However, the Mediterranean market is facing growing concerns over the domestic marketing of rice. Egypt with 5.6 million tonnes is the largest Mediterranean producer, followed by Italy with 1.4 MT and Spain with 800,000 tonnes.

Within the EU, total production has gained momentum, bouncing from 1.8 MT in 1986 to 2.7 MT in 1987. This growth followed the implementation of the Common Market Organisation Regulation (3072/95) in keeping with the current reform of the PAC which, by contrast, had expected a drop in production. The production increase meets the EU domestic demand which is decidedly lagging (around 1.6 MT of processed rice) and cannot intake the surplus. It follows that the EU must necessarily sell the surplus on non-community markets where the average price is 25-30% lower. This impasse has surfaced at a time when GATT Agreements press for cutting export subsidies and opening domestic markets to imports. Expected market price reduction in the next three years and could lead to European surplus crisis an eventually become a major structural crisis.

The EU trade balance is unfavourable. In 1996-1997, the EU imported 539,000 tonnes and exported 279,000 tonnes. In addition, there are two main markets for rice: that of *japonica* and that of *indica*. European exports consist mainly of *japonica* rice (95%) whereas imports consist of *indica* rice (96%). Reaching an equilibrium between supply and demand within the EU depends on a number of variables. The production of processed rice is made of 375,000 tonnes of *indica* rice and 172,000 tonnes of *japonica* rice and consumer demand consists of approximately 930,000 tonnes of *japonica* against 700,000 tonnes of *indica*.

Under normal trade flows, the preferential import quotas apply only to *indica* rice. They include the quotas imposed by the GATT (Art. XXIV.6) (112,500 tonnes), the quantities coming from PTOM-ACP countries since 1998 (160,000 tonnes) and those coming from Basmati, India (500,000 tonnes).

The decision of the Euro-Mediterranean agreements has not been finalised yet. Egypt advocates a (tax-free) tariff concession of 450,000 tonnes of rice, whereas the current agreement grants a subsidy of 25% for a maximum quantity of 32,000 tonnes. The Egyptian interest is obvious. Egypt is the major rice-producing country in the Mediterranean (651,000 ha) and it has seen its rice-growing surface increase by 60%over the last decade, the production having doubled to 5.6 MT (and yields have risen from 5.3 t/ha to 8.2). According to some estimates, *japonica* rice makes up two-thirds of this production.

Since 1991, the government has been pursuing a policy to spur production through market liberalisation and the suppression of compulsory buying price and transport and post-harvest grinding restrictions. In 1992, the market was completely liberalised and opened to private operators.

Rice exports amount to approximately 320,000 tonnes, 35% of which to Europe. The improved competitiveness has resulted in a price rise that favours the expansion of rice-growing areas which are likely to boost the production in the next few years. On the other hand, the high crop water requirements are a critical issue. The Ministry of Irrigation seeks to foster a productivity increase which goes hand in hand with a sound use of water resources. The fourth five-year plan (1997-2002) foresees a slight reduction in the rice growing areas.

Many factors might limit potential rice exports from Egypt:

- the increase in the world production and the fierce market competition;
- the poor quality of Egyptian rice which does not meet the demand of the wealthiest markets such as those in Europe and Japan;
- higher domestic prices and processing costs resulting from the low exploitation of plant capacities;
- the possible removal of aid to consumption from some other food products alternative to rice (mostly wheat flour) which might cause a soaring domestic average consumption per head.

In *Turkey*, crop production accounts for approximately 70% of total output. The main crops are: cereals, industrial crops, oil seeds, protein crops and fruit and vegetables. The recent trend indicates that production of cereals, protein and industrial crops is decreasing, whereas that of oil seeds, fruit and vegetables is increasing. An increase in total crop production (3.1%) was expected in 1997, 5.4% of which in cereals and 9.2% in vegetables. Over the past few years, Turkey has succeeded in increasing its agricultural production owing mainly to increased yields which have offset the reduction of surfaces devoted to fruit and vegetables. The yields of most crops have nearly doubled in the past decade as a result of the higher efficiency of production methods. The share of livestock production is small (17% of total agricultural output), the yields are low and technologies are not advanced. Livestock breeding and feeding and a balance between animal inputs and outputs remain critical issues to be tackled.

In *Cyprus*, more than half the total production is represented by crops (53%). An average 2% increase was recorded over the last three years - despite the drought. Though relatively small, the irrigated surface accounts for almost 72% of production (vegetables, citrus, flowers and clover). Rain fed crops are increasingly suffering from water shortage and the depletion of dams. In 1998, the priority given to household water demand caused severe problems to agriculture and further restrictions on the use of water for agricultural purposes are expected. The livestock sector is progressing at a faster pace and accounted for 34.6% of total production in 1996. However, its contribution to GDP remains low, due to the dependence on imported feed. The loss of access to the major cereal-growing areas in the central plateau (Mesaoria) has led to increased fodder imports. Meat is the key animal product, accounting for 64% of GDP (poultry, pork, mutton, goat and beef). Cow's milk accounts for two-thirds of the output, followed by ewe's and goat's milk.

In *Slovenia*, the cultivated area was reduced in 1997 (-4% for wheat and coarse grains) despite the favourable price trend. Major production changes affected potatoes and the planted area which was reduced by half. (Reportedly, this data is due to changes in the statistical data gathering).

There is no doubt that arable crops are being reduced in marginal areas and that winter cold and hail have caused severe damage, but farmers are harvesting almost the same quantities as before, thanks to technical developments. While the wheat output has decreased by 2.9%, that of coarse grains has increased.

Except for poultry and sheep, there were less animals at the beginning of 1997 than at the beginning of 1996. The number of cattle numbers fell by 2.4% and that hogs by 5.6% respectively. This reduction is due to the fact that production is concentrated in small farms where a generation change of many producers is now underway and the low beef price and the hard work required to run a farm are not appealing to the young generation.

Meat production has increased as a result of higher live weights and more intensive breeding techniques. Milk production is equally rising (+4%) thanks to relatively high milk prices and milk yields. The average milk yield is relatively low, but there is an abundant milk reserve. Most of the cows do not produce milk for the market - they are the so called “suckling” cows. The yields of specialised farms amount to some 3,500 Kg per cow, but there are some dairy farms which total 10,000 Kg. The pork sector is heavily dependent on the production cycle, but remains one of the most profitable branches of agriculture. The poultry industry has recovered after the loss of the former Yugoslavian market and production is again on the increase. The highest growth is in the sheep and goat sector (+ 20% of lamb meat over the past few years). Two factors contribute to this trend: favourable price relations and the restructuring of the traditionally cattle-oriented family farms.

In the EU Mediterranean countries, crop production was relatively stable in terms of volume in 1997. Spain was the only country to experience a strong increase in the production of olives and olive oil. Also beet and oil seed production is slightly rising, partly as a result of the increase in cultivated area and yields and the reduction in fallow lands.

B. Agri-food production

Crop and livestock products constitute both a source of foodstuff for direct consumption and a source of raw material for the agri-food industry. Hence, agriculture is involved in the general economic progress. The agri-food industry is central to the building-up of food assets, the reinforcement of exports and the creation of jobs and, moreover, drives all the other sectors of the economy.

But some basic requirements must be met for agriculture to develop an agri-industrial pattern in keeping with the associated sectors, i.e. increased demand, expanded production capacities, a high rate of reinvestment of profits and an equally high level of integration.

In developing countries, the above conditions are not always concomitant, therefore the agri-industrial development process is slowed down. Inadequate farming techniques, difficulties in exporting products, the scarcity of agricultural products for direct processing and the loose link between agriculture and industry all hinder the moves towards a balanced development of the agri-food industry.

Due its close link with the economic progress, the agri-food industry is mainly concentrated in Northern Mediterranean countries, where it accounts for almost 92% of total production. Compared to the turnover of the French food industry,- which is the largest amongst other Mediterranean countries - for the period 1995-96, recorded data on other Mediterranean countries are as follows: Italy 68%, Spain 66%, Turkey 14%, Greece and Portugal 8% and Egypt and Morocco 3%.

Broadly speaking, the food-industry is characterised by small processing units. In the Mediterranean EU Member States, more than 90% of the processing units are run by less than 20 workers each. However, in the North, the number of workers per processing unit is three times higher than that in the South. The progress which this sector is experiencing in Northern Mediterranean Countries has led to a re-assessment of traditional products, an expansion of the existing processing and marketing units and an establishment of a closer link with the agricultural context and local productions. In Southern Mediterranean countries, food-industry production is still carried out in a very unsophisticated way and the processing of staple products for local consumption is poorly technological. On the other hand, some major production units have been set up to process standard foreign products (i.e. milk and cereals) and supply the towns.

In *Turkey*, the agri-food industry accounts for 13% of the total value added of the manufacturing industry and 16% of employment and relies on a wide range of marketing and service networks. The following were some of the most important production sub-sectors in 1997: cereals and milling products (36% of total agri-food production), fruit, vegetables and vegetable oils (13%), sugar and sugar products (11%) and slaughter house products (10%). An upward production trend has been recorded in poultry, dairy, olive oil, sugar, rice and pasta industries, whereas red meat and meat products are dramatically declining.

In *Egypt*, the agri-food sector (including non-food products such as cotton) accounts for almost 40% of the whole processing industry. Run by both publicly and privately owned companies, the agri-industrial sub-sector has increasingly developed over the past few years with an average yearly growth ranging between 15% and 18%.

The Egyptian agri-food industry shows a peculiar structural dichotomy. On the one hand, there are some major publicly owned

companies that control most of the market (despite the slump which has occurred over the past few years), on the other hand, small and medium-sized companies are increasingly sprouting. However, a low value added rate is reported together with the lack of links with chemical and mechanical industries and marketing and financial services. Some major sub-sectors are flourishing, i.e. cereal milling and bread production, cane and beet sugar processing, rice polishing and dairy industries - the exports of which have climbed over the last few years. Cotton spinning and weaving account for 25% of GDP , 50% of exports and 50% of the employment in the publicly owned industrial sector. Some 25 publicly owned companies (60% of the weaving capacity) and 2 private companies make up the weaving sub-sector.

In *Lebanon*, the agri-food industry is traditionally characterised by small-sized companies, which are heavily under-capitalised and badly in need of restructuring and modernisation. Hence, the agri-food industry is confined to privately owned companies, while publicly owned companies play no influential role in policy planning and product marketing and quality control. The share of this sector dropped dramatically from 11% of total exports in 1993 to 7% in 1995. A wide range of products are processed, in particular alcoholic beverages, canned food and juices, dairy products, chocolates and biscuits.

In *Tunisia*, the agri-food sector accounts for almost 2.5% of total GDP and approximately 19% of total manufacturing output with some fluctuations owing mainly to the variability in olive oil production. The agri-food sector includes 5,000 companies, most of which are small-sized and have a low technical and financial capacity. The following are some key sectors: cereals and cereal by-products (46% of total agri-food production), oils and fats (29%), animal feeding (6%), slaughtering (5%) and milk and cooling industries (45%).

In *Morocco*, the agri-food industry accounts for almost one-fifth of companies and employed people and 35% of industrial output. Mainly oriented towards the domestic demand for staple food products, this sector nevertheless remains a remarkable source of hard currency with one-fifth of industrial exports - owing mainly to the fruit and vegetable processing sub-sector which contributes 90% to the turnover of agri-food exports - and is also a source of seasonal employment. Downstream industries are often highly sophisticated and off-farm employment is the prime mover of growth. In addition, the developed food preserve industry (for tomato sauce, fruit juices and canned fruit) ensures close links with sectors other than agriculture which either provide inputs or depend in turn on further processing sectors. The agri-food industry is estimated to purchase about 70% of its raw materials from agriculture.

In *Algeria*, the agri-food industry plays an influential part in the industrial sector and contributes 30% to industrial output (excluding oil) and 17% to employment. The development of agri-food industries in the late 1980s was complemented by the increase in raw material imports, since domestic supply could not meet the demand - and this included fruit and vegetables. Despite the downward trend which was recorded over the past few years, processed cereals (flour and semolina), oils and fats and fruit and vegetables remain key activities.

In *Cyprus*, on-the-farm processing is of paramount importance, especially as regards the production of local cheese, *halloumi*, raisins, wine and spirits. These products account for 4% of GDP and 32% of manufacturing industry value added. The production of farm-processed food products which has somewhat stabilised is expected to face some problems following the implementation of stricter production standards. The most rapidly expanding sector is fishing owing to the increasing local and tourist demand. Sea aquaculture accounts today for 29% of the gross product of the fishing sub-sector, while trawler fishing is stagnant.

In *Slovenia*, food-processing accounts for 10.4% of total manufacturing output and changed only slightly during the period 1990-1996. During the first two transitional years, production fell as a result of the loss of Yugoslavian markets (-20% for food output and a little less for animal beverage and feeding). In 1993, production recovered and penetrated new markets and in 1996 it even exceeded the levels recorded at the beginning of the decade. Overall, food industry has performed much better than the other industrial sectors and in 1997 the output price level remained stable. Decreasing price levels for raw materials and the restructuring which had taken place, boasted production in 1998.

In *Malta*, the agri-food sector increased by 12.7% in 1996-97, accounting for 19% of total industrial activity and 16% of employment. Heavily protected for a long time, the sector is still oriented towards the domestic market which constitutes a limiting factor on account of its small size. The sector includes 380 companies, three-quarters of which are traditionally small-sized companies producing bakery products. Conversely, meat processing, tinning and animal feed industries are considerably developed. In addition to family concerns, there are also some large publicly-owned and foreign corporations (i.e. Unilever).

The scope for agri-industrial development in the majority of Southern and Eastern Mediterranean countries is mainly conditional on the abundance of agricultural raw materials and low-cost labour. Hence, the improved efficacy of domestic agriculture is of vital importance to boost the activities in the sector and to facilitate the introduction of technologies and promote competition.

In the Mediterranean EU countries, the agri-food sector has a much more complex technological and organisational structure and plays a crucial economic role. In 1996, approximately 84% of Mediterranean agri-food industries and more than 93% of the correlated sectors were concentrated in the EU. Based on past and current developments, four

types of agro-food industries can be identified: 1) small and medium-sized enterprises which apply "niche" strategies and capitalise on the reputation acquired in local and regional markets; 2) small and medium-sized enterprises specialised in own-branded products with a strong market penetration capacity, but heavily dependent on mass production buyers for information about product characteristics, quantity and quality; 3) national enterprises which produce and market on domestic scale and can offer a widely diversified range of products; and 4) multinational corporations which are present on foreign markets with their own brand name.

In *Greece*, the agri-food sector accounts for 26% of total industrial output. The olive sub-sector is particularly important (13% of the agri-food industry). The agri-food sector also plays an influential part in trade and represents 30% of total domestic exports.

In *Portugal*, the agri-food sector is highly concentrated. The major four firms account for 40% of total production. The sector contributes approximately 21% to production and 14% to manufacturing value added. The main sub-sectors are: dairy products (15% of the turnover), feeding (12%), beef meat (8%) and wine (almost 15%).

In *Spain*, the agri-food sector accounts for 14% of industrial production. Among the major sub-sectors, oil and fat industries account for 10%, milk industries for 11%, bakery industries for 9%, and vegetable tinning and wine making for 5%.

In *Italy*, the agri-food sector represents 9% of manufacturing value added and ranks third after the energy, textile and clothing industry. Despite the heavy concentration, the agri-food sector is still fragmented compared to that in the other advanced European countries. The first four leading groups represent 10% of the total turnover of the agri-food sector. Meat and dairy products (17% of total turnover), packaging (11%), house-pet feed (8.5%), animal feed (6%) and pasta (4.3%) are the major sub-sectors.

In *France*, the agri-food sector is highly developed and is the industry's leading sector with a turnover of FF 681 billions in 1996. It contributes 14% to industrial activity and 19% to employment and is relatively concentrated with the four major companies accounting for 12% of total turnover. Meat (26% of turnover), dairy products and cheese (20%), animal feed (8%) are particularly crucial. Mediterranean products are less important. Fruit and vegetables and olive oil amount to 12% of total turnover.

Value added per employee varies widely among countries, ranging between US$ 70,000 per employee in France and US$ 6,300 per employee in Egypt, the disparity reflecting the differences in the technologies used as well as in managerial skills.

V. Consumption trends

Over the past decade all the Mediterranean countries have made huge efforts to meet the increasing domestic food demand and improve their nutritional standards. A rather uniform consumption pattern can be observed in the region, the so called "Mediterranean diet", which is richer in vegetables than in animal products and which is largely the result of historical, social, cultural and climatic factors.

However, some disparities are recorded among the countries as regards the per capita consumption volume of different products, the nutritional standard as well as the consumption breakdown and the share of food consumption in the household expenditure. First of all, the development of food habits varies considerably between developed and developing countries. Since food consumption is the major outlet for agriculture, food habits are a crucial determinant for the growth of the agricultural sector and the achievement of the food-population balance.

It is generally accepted that food consumption per head is increasing though growth rates are progressively declining all over the world and the Mediterranean region is no exception. The key factors which govern the

evolution of aggregate demand for food products are related to: (a) the population growth and (b) the income rise. There is much difference in the population growth and income rate between the developed countries and the developing countries.

The above two factors and the income elasticity of food demand which is decidedly higher in less developed countries has led to the estimation that food demand will grow at a faster rate in developing countries and to a lesser extent in the Mediterranean EU Member States.

The rapid increase in food demand in the North Africa and the Middle East - resulting mainly from the population growth and the rise in income- is generally regarded as a threat to the population-food balance as well as to water and land resources. Governments are reacting by expanding the surface of arable lands and fostering land productivity through the use of irrigation. But, in so doing, they are increasingly diverting public resources from some other uses which are needed to create economic and social infrastructures intended to raise the living standards of the population. The alternative might be to press for a reduction in the population growth rate which would lead to a reduction in the food demand growth rate, thus relieving the pressure on primary resources, such as land and water.

An additional key factor is the change in food consumption patterns which results from increased income received per head. When the income per head increases, a world-wide shift is observed in the consumption trend from staple products such as bread, rice or maize to meat, milk and dairy products. It is generally accepted that this phenomenon is related to the poorer income elasticity of staple products as opposed to that of meat, milk and dairy products. Hence, production facilities will have to adjust to the new scenario and livestock productions will have to be enhanced. Given the existing constraints in the production systems, the current move is towards more intensive productions which make use of feed grains and fodder.

The consumption patterns for cereals, fruit and meat which were observed in the Mediterranean region in 1996 are provided in Table II-6. Per head consumption of staple products is higher in the countries of the Southern rim where incomes are lower and per head consumption of meat is five times higher in Mediterranean EU countries than that in the North Africa and the Middle East. Hence, meat consumption is expected to rise in developing countries if per head income rises and supply increases.

The upward consumption trend of animal products has important implications on the output. Livestock production should be increasingly fostered through the strengthening of intensive and partially intensive production systems. Given the current constraints in terms of land resources and the productivity of grass and pasture land, producers are increasingly using irrigated lands to produce fodder for intensive livestock production. In rain fed areas, they will have to switch from cereal production for human consumption to grain production for feeding purposes.

As far as transitional economies are concerned (especially those of Albania and former Yugoslavian countries), food habits are affected by a wide range of factors such as centrally imposed nutritional standards, supply restrictions and subsidised prices. Food aid used to weigh heavily on the State budget and, despite subsidised food prices, household food expenditure accounted for a significant part of total household expenditure. Calorie consumption levels in transitional economies in the pre-reform period were similar to those in market economies with similar per capita income, whereas wheat and milk consumption owing to severe food price distorsions and aid was higher. Official prices did not reflect market trends and food demand was artificially fuelled by macro-economic disparities.

In many transitional economies, the liberalisation of food prices and trade has resulted in hyper-inflation which has eroded the consumer

purchasing power and deepened income-related inequalities. Consumer prices in some countries have soared whereas domestic food demand has dramatically fallen. A significant increase in staple product consumption (i.e. bread, etc.) has also been observed together with a concomitant drop in the consumption of meat, dairy products and fruit. The share of food in total expenditure has markedly increased, thus indicating a general decline in the population welfare. A reduction in calorie and protein consumption compared to pre-reform levels has also been acknowledged with a corresponding adverse impact on nutrition.

Table II-6. Food consumption and nutrition levels, 1996

	Cereal kg/cap/year	Fruit kg/cap/year	Meat kg/cap/year
Eastern Mediterranean			
Cyprus	113,9	150,1	111,6
Egypt	248,4	107,9	17,5
Lebanon	137,9	262,5	31,5
Malta	151,1	100,8	81,4
Turkey	225,9	151,9	20,7
Maghreb			
Algeria	230,7	56,4	19,8
Morocco	265,8	84,7	16,4
Tunisia	222,8	103,6	20,3
Transition countries			
Albania	147,1	40,5	38,0
Croatia	101,3	106,5	30,7
Slovenia	137,2	92,2	100,1
EU Mediterranean Countries			
France	113.8	95.9	101.2
Greece	149,6	184,4	80,3
Italy	157,6	141,3	84,3
Portugal	127,4	124,6	84,1
Spain	103.3	116.0	99.7

Source: Medagri, 1998

The drop in food consumption is particularly significant in urban areas, though it differs according to the income bracket, and poverty is appallingly increasing. Subsistence agriculture plays an important part in domestic food consumption. The vast majority of households derive food from the cultivation of small plots which they have been allocated and family-production accounts for most of the supply of some food commodities. The recent drop in inflation and macro-economic stability are now contributing to the stabilisation of food markets.

The drop in food consumption which has occurred in most transitional economies is largely documented, but the identification of the contributing factors is no easy task. Food demand has been affected by both price and income. Not only have real food prices climbed following the removal of subsidies, but consumer purchasing power has been significantly eroded by inflation.

In the Mediterranean EU countries, consumption levels have reached such a threshold that only slight increases can be expected. Recent trends are very likely to persist (i.e. the slow population growth and rise in income) along with a low income elasticity which stems from an equally slow increase in domestic food consumption. No major change is expected in the food consumption patterns apart from the increase in the consumption of quality livestock products. But the new consumer food habits and the increased concern for environmental and health issues will undoubtedly have a bearing on the development of future consumption patterns.

Perspectives in food consumption for selected Mediterranean countries

In *Egypt*, food accounts for the largest share of total consumer expenditure. A survey conducted on income, consumption and expenditure in 1990-1991, showed that food accounted for 57% and 65% of the total expenditure of poor households in urban and rural areas,

respectively (45% and 55% of non-poor households). Meat, fish and eggs represented 30% of total expenditure.

Per capita consumption of food commodities shows some major changes. Over the period 1970-1988, the consumption of meat, fish, eggs, sugar, wheat and tubers soared, thus reflecting the high income elasticity of demand - i.e. meat consumption increased from 11.5 Kg in 1970 to 20 Kg in 1985. Maize bread was traditionally consumed in rural areas, but the consumption per head became stagnant during the same period as a result of the increased supply of wheat imported at subsidised prices. Consumption of pulses, broad beans and lentils, which have historically all played an influential part in the Egyptian diet, dropped during the same period. Some of these trends persisted over the period 1990-1995. Per head consumption of fish, meat, oil and margarine is steadily increasing, that of pulses (especially beans) is rising again, whereas that of sugar is declining. This reversal is generally attributed to the drop in consumer incomes.

In *Lebanon*, according to FAO data, a noticeable increase in food energy intake has been observed over the period 1970-1991, the average annual growth amounted to 1.6%. Calories intake increased from 2,330 cal/head/day in 1970 to 3,260 cal/head/day in 1991. The significant improvement in food consumption brings the country close to the average nutrition standards in the EU. The increased protein consumption, which was observed during the same period, was primarily based on vegetables which accounted for 68% of total dietary protein uptake (with cereals alone contributing 36% of the total).

In *Turkey*, some negative changes were recorded over the period 1994-1997. However, data reliability is questionable, owing to significant fluctuations and this is a common problem which is encountered when dealing with world-wide consumption data.

Table II-7. Turkey: Consumption of some food items (kg / cap / year)

	1994	1995	1996	1997*
Wheat	284	281	280	279
Pulses	20	25	24	24
Citrus	24	23	23	23
Vegetables	198	221	215	230
Potatoes	65	75	72	71
Meat	23	23	23	23
Milk	140	135	137	139
Eggs	9	8	8	8

* Forecast

Source: SPO, Developments in Economic and Social Sectors, Ankara, 1996 and 1997

In *Cyprus*, approximately 50% of gross agricultural output in 1996 was consumed directly and 10% was exported as raw material. Per head consumption is remarkably high for some products, such as fruit (146 kg / head / year), meat (122 kg / head / year) and milk (92 kg / head / year). Calorie intake is similarly high. However, the interpretation of figures requires due caution. With the number of tourists approaching 1.9-2.2 million per year (i.e. several times the population of the island), per head consumption figures might be distorted by up to 10% on average.

In *Algeria*, per head consumption has probably decreased as a result of the drop in both demand and purchasing power. Cereal consumption is high (230 kg / head / year) as is the case for all Maghreb countries, whereas the consumption of meat and dairy products, though increasing, remains low. Some key changes have been observed in food prices, owing mainly to the increase in demand and the implementation of new economic policies. Table 8 shows that, though general prices increased four times between 1990 and 1996, those of food commodities increased five times, primarily as a result of an increase in the price of processed food products. Price trends

indicate that eggs and poultry have dramatically soared, owing to the rapidly growing demand.

Table II-8. Evolution of food prices in Algeria, 1990-1996

	1990	1991	1992	1993	1994	1995	1996
General index	117.87	148.38	195.38	235.51	303.91	394.42	468.12
Food items	122.72	147.32	184.94	230.53	325.63	425.81	510.71
- of which- fresh	130.41	156.61	173.45	206.49	282.26	295.77	354.14
- processed	108.13	129.69	206.73	276.13	407.89	672.45	807.69
Lamb	121.30	155.01	183.14	203.34	236.49	261.50	316.54
Beef	114.96	152.86	178.56	204.75	240.98	247.94	309.95
Poultry	145.39	182.38	213.19	241.84	310.84	335.27	475.54
Eggs	124.37	157.42	212.68	339.00	410.64	415.76	541.88
Fish	108.25	129.31	138.53	191.61	240.57	245.52	300.62
Potatoes	127.91	155.74	137.60	236.83	501.36	395.97	447.06

Source: Statistical collection N° 73, Series E. Economic statistics "Index of consumption prices" National Statistical Bureau, Algiers.

Note: The average of the period 1986-1995 is 100.

In *Tunisia*, forecasts are for a drop in the consumption of cereals and for an increase in the consumption of the other products, particularly that of meat and fish - the consumption of which is expected to double within the next 25 years. However, in order to forecast future total consumption the population growth rate should be taken into account - Table 9 shows only per head consumption. With a population growth projection exceeding 13 million in 2020 (average projections provided by the UN) against 9 million in 1996, meat total consumption for the period 1995-2020 is expected to increase almost three times. It is noteworthy to recall that, using the same population growth projections, water supply in Tunisia in the year 2025 is expected to fall to 328 m3 / head / day against 1,130 m3 / head / day in 1995.

Table II-9. Projected per capita consumption of food items in Tunisia

(kg / cap / year)

	1990	2000	2010	2020
Cereals	196.4	181.3	167.4	154.6
Vegetables	133.7	141.8	150.5	159.6
Fruit	53.0	56.2	59.7	63.3
Milk and dairy	75.9	86.0	86.0	86.0
Meat and poultry	19.9	24.1	29.3	35.5
Fish	7.1	9.2	11.5	14.3
Edible oil	21.3	22.6	24.0	25.5
Sugar	17.4	19.3	21.5	23.9

Source: Mr. Lasram (1998) "L'agriculture tunisienne : réalisations de l'année 1997 et perspectives"

In *Morocco*, food consumption trends, in the long run, can be assessed based on the long-term production progress (providing that exports and imports do not change the picture significantly). Over a 20-year period - from 1971-1975 and 1991-1995 - the consumption of livestock products increased markedly, as shown in Table 9, based on production calculations (the population figures used for the calculation are 16.2 and 25.5 million over the two half-periods, respectively). The upward trend of livestock productions, which was necessary to meet the rapidly increasing demand, is confirmed by recent figures. Between 1996 and 1997, total meat production (both red meat and poultry) climbed from 483 thousand tonnes to 541 thousand tonnes (+12%), the production of milk soared from 850 thousand tonnes to 950 thousand tonnes (+12%) and that of eggs increased from 195,000 tonnes to 200,000 tonnes (+2.5%).

Table II-10. Evolution of agricultural production in Morocco

(kg / cap / year)

	1971-75	1991-95
Cereals	275	202
Pulses	28	9
Olive oil	2	2
Sugar crops	103	154
Vegetables	65	113
Fruits	89	90
Red meat	13	18
Poultry meat	2	6
Milk	32	36
Eggs	3	7

Source: Medagri, 1998 and Moroccan Statistical Collection, Rabat, 1997

In *Slovenia*, data gathered during a survey on household budgets complemented by food balance calculations provide sufficient insights into food consumption patterns. Food expenditure is quite stable and accounts for 26% of total expenditure, which is among the lowest rates in European and former USSR transition economies. Over the past few years, consumption undoubtedly increased. Per head meat consumption reached 98 kg in 1997 (against 87.7 in 1992). The highest increase was recorded for poultry (23 kg in 1997 against 15 kg in 1992). Per head consumption of cereals and sugar soared from 18% in 1992 to 53% in 1997. Some additional key trends were identified in food habits.

These trends are similar to those which are generally observed in OECD countries. The consumption of fruit and vegetables is on the increase. Red meat is being progressively replaced by poultry. Some alternative products, such as lamb and olive oil, are increasingly gaining

importance in the diet. And environmental awareness is similarly gaining ground.

In *Croatia*, food consumption per head remained relatively stable or increased slightly during the transition period. However, food habits have changed since the early 1990s with a reduction in the consumption of beef and poultry - while the consumption of pig meat has remained relatively stable. Consumption of sugar and oil is also on the increase.

In *Albania*, according to data gathered in surveys on household consumption, diet is still heavily dependent on cereals (50%) and the energy intake is inadequate. Per capita consumption of bread is about 200 kg per year. In addition, food habits vary widely between urban and rural areas. Urban consumers depend on imports for many food commodities, since domestic production accounts for approximately 70% of food requirements.

Table II-11. Food consumption in the EU Mediterranean Countries, 1996

(kg / cap / year)

Country	Cereals	Pulses	Meat	Fish	Milk	Vegetables	Fruit	Fat and oils
France	113.8	2.1	101.2	27.9	256.2	123.5	95.9	35.2
Greece	149.6	5.2	84.1	25.6	239.8	246.1	184.4	30.8
Italy	157.6	5.5	84.3	23.1	254.2	168.4	141.3	34.9
Portugal	127.	4.7	80.3	58.7	175.6	161.3	124.6	30.1
Spain	103.3	7.3	99.7	37.1	161.1	134.4	116.0	30.8

Source: FAO-Medagri, 1998

In the Mediterranean EU Member States, despite differences among the countries in the level of consumption per inhabitant, food habits are quite similar. And this is the result of some trends which have been monitored

over the past decade (cf. Table II-11). Per head consumption in the post-war period was characterised by a fall in the direct consumption of cereals and starchy products. The second major change was the increase in the consumption of animal products, especially of meat, milk and eggs. Also the consumption of fruit and vegetables increased. These changes are in accordance with the normal evolution of consumption patterns which characterises any economic progress. On the other hand, the consumption of olive oil is relatively high and will probably stabilise in the future, while that of fruit and vegetables is expected to rise and that of sugar to remain stable.

Food consumption patterns can also be explained when the actual supplies are taken into account. The consumption of fruit and vegetables is higher in some countries as a result of different prices and availability of the products.

Olive oil consumption is equally high, but may tend to decrease because of the low income elasticity in oil demand. The differences in sugar consumption are probably related to income differences and the consumption of cereals will tend to fall as it approaches the average consumption standards in the EU. The change in the consumption pattern of meat in favour of poultry and pig meat is a common phenomenon in all the countries. However, the issue is still controversial. Some people claim a change in taste whereas others stress the change which has occurred in relative prices. As far as Southern Mediterranean countries are concerned, the latter explanation seems more likely to apply.

V. Agricultural and food policies

A. Overview and perspectives

Since the 1980s, the economies of most Mediterranean countries have undergone deep structural changes which have involved all the production

sectors and have significantly reshaped domestic policies. This transformation has occurred both in industrialised and in developing countries, but in the latter the social and economic importance of agri-food activities has had a stronger impact on the national scene. The agri-food policies constitute one of the pillars of the economic policies, mainly through price policies. It was generally accepted that a system of incentives to agricultural production, which acted on the increase in supply, would ensure a fixed domestic supply. Also the different branches of the agri-food chain benefited from publicly-funded subsidies. Hence, agri-food policies were based on consumer subsidies that served mainly as a means to transfer public aid to the poorest social classes.

Towards the end of the 1980s, foreign debt had soared to critical peaks in many countries. Hence, structural adjustment policies were implemented in a number of them (i.e. Algeria, Egypt, Morocco, Tunisia, Turkey). It seemed the only way out. Negotiations with international organisations such as; the International Monetary Fund and the World Bank, in particular; were initiated in order to curb the debt through a strong reduction in domestic demand and public expenditure. These objectives were pursued through strict monetary and budgetary policies - which increased tax receipts, mobilised domestic savings and reduced the deficit of the balance of trade - and also through sounder public investment policies. Central to these strategies were the establishment of market mechanisms, the international openness and the implementation of a body of legislative and financial reforms aimed at attracting foreign capital and investment. The adopted reforms have produced varying effects on the organisation of the agricultural sector in the different countries and depending on the level of consensus within each country have been applied in different measure.

B. Price and subsidy policies

Over the past ten years, the Common Agricultural Policy (CAP) reform, the structural adjustment policies and the transition towards a market economy have reshaped agricultural price and subsidy policies in the Mediterranean countries. These reforms have been implemented within the framework of a generalised liberalisation of markets, as has already been discussed. The actions have focused on price support and supply management, direct grants and premiums to farmers, subsidies to production and an agricultural taxation system.

In *Turkey*, major political and instrumental changes have been made in order to implement the above price and subsidy policies. Despite the help given to producers, through support prices and subsidies to inputs (in particular to fertilisers), the scope and the level of implementation have declined. Domestic financial constraints and international commitments have been the prime movers of these reforms. Since their introduction, the number of supported products and the volumes purchased by supporting organisations have varied over the years.

The share of guaranteed purchase of wheat, barley, beet and tobacco increased in 1997. The goal of the agricultural price and subsidy policy is to boost and stabilise agricultural production in order to meet the increasing domestic consumption at relatively low prices and foster exports in order to increase foreign currency inflow.

Subsidies to inputs play a specific role in the Turkish support system. The subsidy programme focuses on animal feeding, parent stocks, fertilisers, seeds, pesticides and processed milk, but in practice 84% of total subsidies go to fertilisers - the rate in 1996 was 50% of farmer purchase price. In addition, subsidies account for 6%-9% of total crop production. Tables II-12a & b are reporting Producer Subsidy Equivalent (PSE) and Consumer Subsidy Equivalent (CSE) values for Turkey as calculated by OECD.

Table II-12a. Turkey: Producer Subsidy Equivalent (PSE)

		1986-88	1993-95	1994	1995	1996
	TL (bn)	1590	85483	56980	156981	298572
Turkey	US$		3074	1913	3432	3673
	ECU (mn)	1419	2516	1613	2626	2894
	%	26	30	25	31	30
	US$	158609	173908	174935	179644	166004
OECD	ECU (mn)	144338	142535	147488	137428	130778
	%	45	41	42	40	36

Table II-12 b. Turkey: Consumer Subsidy Equivalent (CSE)

		1986-88	1993-95	1994	1995	1996
	TL (bn)	-1069	-65135	-36126	-121802	-241659
Turkey	US$	-1087	-2431	-1213	-2623	-2973
	ECU (mn)	-982	-1993	-1023	-2037	-2342
	%	-18	-22	-14	-21	-22
	US$	-118	-121938	-121326	-120201	-95219
OECD	ECU (mn)	-107812	-100115	-102290	-91954	-75013
	%	-37	-31	-32	-29	-23

Source: OECD, Agricultural Policies in OECD Countries, measurement of support and background informations, 1997.

A difference in values can be observed till 1996. Hence, market price support account for 70% to 72% of subsidies, whereas subsidies to inputs represent 20% to 30%. However, direct payments are very low.

In *Tunisia*, the price policy is aimed at trimming inflation, organising distribution channels and promoting product quality to boost the competitive power of Tunisian agricultural products.

The manufacturer price for cereals, which is set by the State before the campaign, did not vary in 1997. The other products (fruit, vegetables, meat and milk) increased slightly, whereas the average price of olive oil was reduced probably as a result of the extremely high harvest yield.

In 1998, regulations were introduced to organise and manage wholesale markets, with the introduction of cargo books and specific rules for packaging, sizing and invoicing aimed at improving marketing channels.

The policy which has been implemented for the above products is aimed at controlling subsidies, as much as possible, in order to lighten the burden of the equalisation fund. The policy proves equally useful in keeping production costs under control.

As for input prices, no increase was recorded in 1997 (for seeds and fertilisers), despite the increase in cost prices.

Pricing policies, crop control and subsidies to inputs had hindered agricultural growth in Egypt till the late 1980s. The prices offered by the Government for most cereals were low compared to import and export prices. The Egyptian Government adopted a new price policy focused on the removal of price restrictions for most crops in 1987, but maintained minimum prices. This strategy resulted in the increase in real prices for wheat between 1987 and 1992. Marketing restrictions were suppressed for all crops, except for rice, cotton and sugar cane. As for wheat and maize, fixed procurement prices were removed since they depressed the farm gate

price, on the one hand, and disrupted feed industry, on the other. Rice prices were liberalised between 75% and 90% of world prices in 1987-1990. As for cotton, procurement price was gradually increased by up to 75% of border price, as recorded in 1991, then to 114% and 132% of border price in 1992 and 1993, respectively. Cotton marketing was fully liberalised in 1994 and additional measures were introduced, such as subsidies to inputs (50%-60%) for minor crops. Fertilisers were the major input which was taken into consideration at the time of the political reform. In kind credit was allocated, according to priorities based on crops. Subsidies to fertilisers were abolished in 1992 - after a 13% increase from 1985 to 1988. Subsidies to fertilisers for cotton-growing were removed in 1991, while subsidies to pesticides for the same crop decreased by 25% in 1992 and became null in 1994. This provision was then applied to all the crops.

Following the reforms adopted in the late 1980s, *Morocco* has reached a high level of price liberalisation for both inputs and outputs. The price of durum wheat, barley, maize and common wheat is no longer subjected to any control. By contrast, the price of sugar beet and sugar cane, oil seeds and cotton is still State-controlled. In the long run, the products that have increased the most, both as regards the surface grown and the yield (common wheat, sugar beet, tomatoes and potatoes), have not only benefited from relatively adjusted prices, but also from a globally favourable environment (access to production factors under preferential conditions, State or co-operative services, extension services, plant control and guarantee on market outlets). Most subsidies to production have been gradually removed - except for irrigation -, thus leading to increased investments. Foreign trade in agricultural products has been largely liberalised (imports and exports). The liberalisation process is pursued within the framework of the Association Agreements with the EU and the obligations established under the GATT's Agreements in Marrakech. But the industrial effects have fallen far short of a genuine liberalisation. Hence, Morocco is currently negotiating new deadlines to cope with structural

problems, such as the quality of information, the transparency of administrative and technical decisions and the capacity to adjust customs tariffs to market developments.

Algeria has followed a policy oriented towards market liberalisation, disengagement from the publicly owned sector and support to agricultural development. At present, the basic price policy applies only to wheat. No subsidy is granted to production except for specific investments (irrigation and livestock). As for consumer prices, price support has been replaced by monetary aid to less prosperous households.

Reportedly, the *Lebanese* government has not applied any policies to subsidise agricultural inputs, nor to support crops, livestock productions or raw materials to be used in the agri-food processing industry. Nevertheless, a policy of price subsidies has been implemented for three crops, which are deemed strategic for the national social and economic development:

- wheat (mostly durum wheat) with a subsidy level which reaches 20% of the international market price;
- sugar beet with a subsidy level which reaches 100% of the international market price;
- tobacco with a subsidy level which ranges between 40% and 120% of the international market price, depending on the variety and the quality permitted by the climatic conditions in the cultivation area (Southern Lebanon).

The total cost of the above subsidies amounts to approximately US$ 50 million (80 billion Lebanese Pounds), i.e. 1% of the national budget in 1998. The price subsidy policy, however, implies some risks, since the socio-economic support given to Southern farmers (for the cultivation of tobacco) and in the Bekaa (for the cultivation of tobacco, sugar beet and wheat) is not sustainable from the economic, agricultural and the environmental points of view. Farmers are bound to be confronted with severe economic

constraints when subsidies are lifted. In addition, subsidies deter farmers from applying crop rotation schemes, especially in the cultivation of sugar beet, to the detriment of soil quality (nematodes, fungi, weeds, etc. proliferate) and the environment - which suffers from excessive and uncontrolled fertilisation.

In *Croatia*, current price policies combine intervention prices, State purchases of selected commodities and import tariffs. The Government also allocates price incentives and input subsidies. Average producer prices in Croatia are significantly higher than those in the other European countries (except for Slovenia) for wheat, maize and poultry, whereas they are only slightly higher for pork. State is gradually reducing its intervention in price setting, except for some staple products such as wheat, oil seeds, sugar beet, tobacco and milk (1994-1996). However, in recent years, the State Director for Commodity Reserves has continued to purchase wheat in accordance with the "strategic reserve" concept inherited from the centrally-planned system and to react to the devastation brought about by the war. Interest subsidies were widespread in the early 1990s and accounted for more than 90% of total subsidies. They were abolished in 1994 and replaced by input subsidies. The following is a breakdown of subsidies for the period 1995-1996: 27% to crop production; 44% to livestock production; 7% to inputs; 15% to fertilisers and 7% to fishery. The December 1996 law on premiums and subsidies diversified support in order to favour some marginal sectors, specific productions (fishery, fruit and olive growing) and direct payments to farmers.

In *Cyprus*, subsidies are mainly given in the form of income support, price guarantees, development finance and input subsidies.

- Income support is a direct subsidy which is given to vine-growers per hectare (in the past it used to be given to citrus growers too). Indirect subsidies are paid by the Crop Insurance Organisation which refunds

farmers for crop losses, but most insurance premiums are paid by the Government.

- Price guarantees are subsidies to cereals, grapes and vine products.
- Development finance are loans at subsidised interest rates which are provided for the consolidation and the construction of irrigation works, the establishment of young people in rural areas, the employment of young farmers, farm mechanisation, etc.
- Input subsidies are subsidies to inputs, such as cereals used in animal feed, and the construction of dams and reservoirs.

Agricultural prices are largely set by market mechanisms, though for certain commodities they are set by State organisations, as is the case for cereals, grapes, milk and dairy products, poultry and olive oil. The harmonisation with the EU will undoubtedly call for the removal of price control and the liberalisation of trade.

In *Albania*, the prices of agricultural products and inputs have been liberalised, except for wheat and irrigation. The real appreciation of the lek after 1993 has lowered the relative price of imported flour and has affected the viability of domestic flour mills which must pay the set minimum price in order to mill wheat. Subsidies to food products have been suppressed. The private activity of input suppliers, such as fertiliser companies, has decreased as a result of price liberalisation. Export restrictions or taxes apply to a number of key products. Export licences are required for timber and raw tobacco, whereas an export tax of 100% is levied on non-processed leather. Import taxes on products range between 5% and 30% and are used to provide price support for substitute products. All quantitative restrictions on imports have been removed. Hence, the agricultural protection level in Albania is rather low at present.

VII. Investment and structural policies

Investment and structural policies differ among the Mediterranean countries. EU interventions are mainly aimed at enhancing forms of production, which are compatible with the preservation of natural resources, the production of quality commodities (organic and typical products) and focus on favouring the establishment of young farmers and improving living and working standards.

In Southern countries and in Turkey, the focus is mainly on the execution and the improvement of irrigation works, the modernisation of farms, the introduction of new techniques and production systems, a sounder use of collective land resources and the setting up of economically viable farms. These actions are aimed at reducing the constraints that hinder agricultural development and at improving the exploitation of lands through intensification and re-organisation strategies. Hence, the intervention instruments and the participatory forms of the State vary according to the objectives.

In *Turkey*, the agricultural investment policy is mainly oriented towards the improvement of infrastructures and support measures in less developed regions. The share of agricultural fixed capital investment accounts for 6% of the total and the ratio between the agricultural fixed capital investment and the agricultural GDP has reached 9% over the last two years. Additional structural instruments have been introduced within the framework of structural programmes (induced investments and agricultural credit through loans at subsidised interest rates).

In *Tunisia*, the investments in the agricultural sector in 1997 accounted for approximately 14.3% of total national investments. 11% growth was expected for 1998, i.e. 860 million Dinars (US$ 900 million), half of which ensured by private individuals who invested in the fruit, livestock and fishing sectors. Most public investments are used for water management and irrigation purposes (dams, hilly lakes, canals and pipes). As for the

structural policy, actions have been taken to reclaim State-owned lands and allocate them to development agencies, technicians and young farmers. Targeted technical assistance and monitored land management have also been central to the new scheme which has been implemented to cope with recession and the financial commitment taken. In 1998, agricultural training included the launching of a pilot training programme in six regions and the introduction of the activity of farm adviser (on a private and personal basis). Special attention was also paid to the development of inter-professional associations. Lastly, supply services (seeds, fertilisers, pesticides and animal feed) will continue to be gradually transferred to private individuals pursuant to the recently adopted policies.

Over the past few years, *Egypt* has increased investments in agriculture, which accounted for 10% of total investments in 1997. This increase is closely related to the actions taken within the framework of the PAC reform.

The actions pertaining to the technological development of production facilities in the agricultural sector as well as in the industrial sector are planned by the State, together with co-operative societies and private individuals.

In *Morocco*, some major structural programmes regard land policies and irrigation. The State is pursuing a national irrigation plan aimed at expanding the irrigated areas, increasing the technical and economic efficiency of irrigated farms and adjusting the services provided by the regional agencies in the field of irrigation network management.

Land policy actions are mostly oriented towards the solution of issues such as the statute of precarious lands, the fragmentation of holdings, and the absence of deeds stating farmers' ownership of lands.

The structural adjustment measures which were implemented in *Algeria* in the late 1980s have considerably increased the price of production factors, thus resulting in reduced credit guarantee schemes and access to

irrigation material. The focus is now on the reinforcement of the organisation of the agricultural profession in order to establish closer links between farmers and public authorities. Hence, some Sub-sector Councils have been set up (that for "palm dates" in 1998) to help the Authorities plan policies to be implemented in the agri-industrial sub-sector.

In order to better identify the beneficiaries of State subsidies to agriculture, the Ministry of Agriculture adopted, in 1996, a regulation providing the pre-requisites for qualifying as a farmer.

The budget to support agriculture accounts for 10% of total agricultural production. Investments focus mainly on infrastructures, such as dams, collective irrigation networks, reforestation and desertification control. The public investment aid policy includes financial aid at a variable rate granted through the National Fund for Agricultural Development and private investments to individual firms and co-operative societies to improve production. However, this fund is scarcely used because of the reluctance of potential beneficiaries to provide financial statements and data on the planned use of funds.

The main objective of the agricultural policy in *Croatia* is to change the agriculture structure, with the enlargement of family farms and incentives to farmers to purchase or lease lands. But the lack of credit schemes and the underdevelopment of the land market is slowing down the process. The previous economic system had fostered the self-management of collective enterprises. The privatisation of these enterprises remains a critical issue in the Croatian economic transition. The privatisation process is far from complete owing to objective constraints and the policies implemented so far. The small size and scattering of family farms hinder any increases in productivity and agricultural developments.

Political measures aimed at the improvement of the structure of agriculture and the establishment of a solid economic background are based (apart from the privatisation of collective farms and lands) on the

reinforcement of a private marketing sector for inputs and agricultural products, the suppression of monopolies, the improvement of co-operative management, the introduction of a sustainable rural credit system and the allocation of subsidies to agriculture, including extension and market research services. Efforts have been made so far, but progress is slow.

In *Cyprus*, the Government has initially focused on the development of rural infrastructures - to spur on the development of irrigation projects -, income support, price guarantees on a product basis, the protection of non-competitive sectors (through import prohibition and quotas), and aid to full-time and part-time farmers. Structural improvement has been encouraged by rules and standards, lending schemes and a modest programme for land consolidation.

Within the development programmes, attention has been paid to crop production through incentives for early variety exports and high value products compatible with the high local labour-costs. In the livestock sector, the emphasis has been mainly on the establishment of modern and viable units.

VIII. Rural development policies

Rural development and planning policies vary widely between developing and developed Mediterranean countries. In North Africa, the Middle East and Southern Europe, agriculture remains the mainstay of the social and economic fabric. By contrast, in the Mediterranean developed countries, agricultural activities and employment are losing much of their original importance.

In developing countries, rural planning and agricultural development are critical issues since very little if any non-agricultural activity exists owing to the lack of resources and facilities. But, since most of the population lives in rural areas, rural development (both agricultural and non-agricultural) plays a vital part in the fight against poverty. Hence, the

Government has tried to expand the production capacity of agriculture through a sounder use of water and land resources and through ambitious investment schemes aimed at boosting productivity. In most North African and Middle East countries, agricultural development is supported by publicly funded irrigation projects, land reclamation works and programmes to foster rural settlement. Some countries have comprehensive and well structured agricultural strategies whereas others focus mainly on water management, the expansion of the agricultural potential or the development of agri-industry and marketing.

Conversely, in advanced countries, rural development is no longer synonymous with agricultural development as a result of the diversification of employment - only a small part of the total active population works in rural areas. Hence, development policies in these countries aim at a broader spectrum of economic, social and environmental objectives.

As far as governmental measures are concerned, rural development implies integrated projects rather than agricultural policies or development instruments. The major concern is the establishment of a diversified rural economy through aid to non-agricultural or agriculture-related activities and the implementation of institutional mechanisms that loosen development constraints and release the endogenous development potential in rural areas. The issue is particularly critical in extremely remote areas or in those with low resource endowments. The question remains as how to involve them in the general move towards the adjustment of agriculture and the increased long-term viability of the sector and of its economic and social contribution to rural development.

A. Rural planning and development policies in selected Mediterranean countries

In *Egypt*, land and water are the major limiting factors to rural development. The Egyptian agricultural sector is fully conditional on the

irrigation from the Nile. An extensive public system of delivery canals supplies water to plots. Without this water distribution system not only farming but also life would not be possible in Egypt. In order to control the geographical distribution of water supply and to feed the canals, some dams have been built along the Nile over the past century. Additional dams have been built over the past fifty years to increase storage capacity and water supply. Free of charge water supply to farmers has led to a wasteful use of water - 98% of lands are flood irrigated and cause severe problems of drainage, erosion and salinisation.

Efforts have also been made to favour the establishment of farmers in rural areas. It is the so-called “new land” policy, which complements the previous “old land” policy, which had promoted agriculture along the Nile. The region to the west of Nubaria is part of this land settlement project. The Ministry of Agriculture has started a land reclamation process by allocating plots (2.1-2.4 ha per head) to first-time farmers or agronomists. Given the economic and social issues which the newcomers are confronted with, the need is felt to implement accompanying programmes to help the establishment of new social infrastructures.

In *Lebanon*, the agricultural development plan addresses several key issues, such as the management of agriculture, the marketing of inputs and agricultural products and the provision of agricultural credit. The plan includes the consolidation of water resources, irrigation projects, land reclamation, the development of human resources and the construction of roads.

The plan is also aimed at promoting employment in less developed rural regions and increasing the productivity of agri-food systems through an increase in value added.

The plan tackles issues that have been disregarded by the Government over the last decade - which had focused only on border protection

measures - though these issues do not always fall within the scope of the Ministry of Agriculture.

For instance, water and irrigation management, agricultural product quality control, export promotion, agricultural product processing, the management of co-operative societies, tobacco production and subsidies and agricultural teaching fall within the scope of various governmental bodies or independent public agencies.

In *Lebanon*, the Ministry of Agriculture adopted a three-year plan (for the period 1993-1995), the so called "Recovery Plan for The Reconstruction and the Development of the Lebanon" in order to cope with the devastating state of agriculture brought about by more than 20 years of political and social insecurity. In 1997, the Ministry of Agriculture announced the "Ministerial Working Programme till the Year 2000".

Among the objectives of the programme there is the expansion of the agricultural area, through land reclamation and irrigation projects, to be implemented through the Green Plan of the Ministry in co-operation with the Council for Reconstruction and Development. Some additional objectives include the construction of roads and terraces to curtail production costs, the consolidation of water resources and the development of irrigation projects in co-operation with the Ministry of Electricity. Last but not least, a pilot project will be launched in a particular region to enhance the role of women in rural and agricultural development.

In *Turkey*, the rural development policy has a long history and is characterised by the planned development policy which was started in 1963. Each five-year plan included goals and instruments to foster the agricultural and rural development. Over the last 30 years, many rural development projects have been successfully implemented. Some of the projects were funded through the Government budget or by international organisations. Given the markedly agricultural character of most rural regions, development projects have mainly focused on the increase in

agricultural output, the development of trade in agricultural products, the promotion of agri-food industries, the motivation of the rural population and the improvement of infrastructures. A project has been launched in the South of Anatolia (the so called GAP[11]) to fuel the development in the south-east and in the country as a whole. The rural development policy is also aimed at bridging the gulf between Eastern and Western regions.

Though *Cyprus* is a small island, its regions differ widely. There are significant disparities between urban areas (which are growing steadily) and rural areas (which show a 50% income gap), agriculture is the leading activity in rural areas, public services are inadequate, the road system is poor and non-agricultural activities are rare.

Current policies have focused on rural development through village improvement programmes, but no targeted nor consistent plan has, so far, been launched. Despite its success, the rural development project funded by the World Bank in 1980 in the mountainous region of Pitsila has not been repeated. However, the prospects for EU full membership and those for benefiting from structural and cohesion funds should promote further development actions in both urban and rural areas.

In *Algeria*, 1997 marked a turning point since rural development started to be considered a priority by the Ministry for Regional Construction and Development. Last year, the above Ministry together with the Ministry of Agriculture implemented a development programme in three regions at risk: arid areas, steppes and mountainous regions. The aim of the program was to develop more than 630,000 ha to provide 500,000 jobs. The total cost of the programme amounted to 83 billion DA for a period of 6 years.

In *Tunisia*, as well as in other North African countries, rural development and planning has a long tradition. Rural development is fostered through agricultural development projects, the development of

[11] Great Anatolian Project.

water resources, land reclamation and the management of natural resources on the regional or national level. Rural policies are also aimed at improving the road network, rural housing and electrification.

In *Slovenia*, 70% of agricultural lands are located in disadvantaged mountainous or karst areas. Most support is directed towards agriculture. Rural development programmes are sponsored by three Ministries: (a) The Ministry of Trade and Development that grants rural development funds for long-term actions; (b) The Ministry of Environment and Planning that allocates subsidies to protected areas; (c) the Ministry of Agriculture, Forestry and Food which has implemented two rural development programmes.

The two programmes which have been launched by the Ministry of Agriculture are: (a) the "Overall Development Countryside and Village Revitalisation" plan dating back to 1991 and including some local projects and (b) the "Fund for Regional Development and the Maintenance of Populated Countryside", which was established in 1996 and which co-funds economically and ecologically acceptable projects to sustain the social and economic organisation of fragile areas which are threatened by rural exodus. Nevertheless, these measures face financial and administrative problems (selection of villages, bad definition of responsibilities, co-ordination between various actors, etc..).

In *Croatia*, the rural development policy is less developed because the Government has not focused on the issue. The emphasis is on the production of quality and organic products and on the integration of agriculture in the social and economic fabric (through measures such as the adjustment of farmers' pension benefits to those of other professional categories).

In *Albania*, the draft Agricultural Development Strategy (the so called "Green Strategy") focuses on the long-term management of natural resources in a number of regions. The strategy stresses the need for rural

development policies which can fuel rural economic activities and off-farm income in order to curb the growing rural exodus, especially in mountainous regions. The awareness of the issue and the widespread consensus gained are a promising starting point.

In the EU Member States (Greece, France, Italy, Portugal and Spain) rural development measures aim at accelerating the adjustment of agricultural structures and promoting rural economy. Aid is given to less favoured areas through compensatory allowances to farmers to offset higher production costs.

Some additional regional policies are included and sponsored by the Structural Funds in the Objective 1 and 5B regions. Under Objective 1, programmes are implemented through the European Agricultural Guidance and Guarantee Fund (EAGGF). Some of these programmes are multi-funded, which means they are funded by different structural funds. Among these programmes one can mention the "free-crop" conversion programme (Greece), a programme to develop Portuguese agriculture and several inter-regional and multi-funded projects in Italy and in France (Corsica and Overseas Departments). Some other initiatives promoted by the Commission include INTERREG (cross-border co-operation and economic revitalisation of EU border regions), ENVIRE (improvement of the environment along coastal areas) and REGIS (socio-economic integration of the most remote regions).

B. Agricultural and environmental policies

Growing attention is being paid to environmental issues by Governments and international organisations. Soil erosion, desertification, irrigated land salinisation, over-exploitation of soils and water resources due to crop-soil incompatibility problems and intensive land management practices are some of the major concerns in Southern Mediterranean countries. On the other hand, landscape management and recreational use of land, bio-diversity and nature conservation, water quality and animal

welfare protection are the main challenges which are now facing North Mediterranean countries, in particular the EU Member States.

In *Turkey*, a key feature of the development policy - mainly that which is foreseen in the seventh five-year plan - is the move towards a sustainable agricultural development to ensure the sustainable use of resources. Efforts have been made to protect the environment in the implementation of the agricultural policy (through a compromise in economic, social and technical measures). Some institutional re-arrangements and new legal adjustments have been made to this end with a view to controlling the environmental side-effects associated with farming and non-farming activities.

Special attention has been paid in *Tunisia* to the treatment of waste water which is partly used for irrigation purposes. Many projects have also been carried out to protect the environment, such as those to ensure watershed management, erosion control, the construction of hilly lakes, sufficient groundwater recharge, etc..

In *Tunisia* and in *Morocco*, the emphasis is mainly on research programmes on integrated pest control, biological control and sound fertilisation techniques aimed at protecting the environment against chemical pollution.

In *Egypt*, agricultural-related pollution is generally regarded as “non-point pollution”. The major sources of contamination are soil sediments, nutrients (particularly nitrates), pesticides, mineral salts, heavy metals. As for water, pollution is mainly due to sediments, nutrients and pesticides. Agricultural pollution control is constrained and rather difficult to enforce. As regards point pollution, waste water may be treated or filtered in order to abate any harmful effects before being discharged into rivers, but agricultural pollution abatement is more difficult owing to the diffuse nature of discharges.

Agricultural pollution control measures must involve farmers. Some key features can be identified in the role played by agriculture in water pollution - the most important of which is that residues are unavoidable by-products of agriculture.

On the other hand, economic decisions which include crop rotation, changes in production practices or technological developments affect both the composition and the timing of agricultural waste flows. And, lastly, the production process has an impact on water outflows (both in terms of space and time), which in turn affect the delivery and the transport of potential loads.

Egyptians farmers have to apply fertilisers in order to offset the poor silt content of soils. In the past, farmers used to rely heavily on Nile floods to renew the lands and increase the silt content. However, the construction of the High Dam in 1969 halted the flow of nutrient-rich silt and led to an increasing demand in fertilisers with the corresponding sprouting of domestic fertiliser industries. Among the main plant nutrients (i.e., nitrogen, phosphorus and potassium), nitrogen is the most widely applied element and accounts for 80% of total nutrient consumption. Fertiliser costs represent the most important expenditure item for crops. The budgetary fertiliser price reform initiated in 1988 aimed at progressively reducing subsidies to fertilisers. All budgetary subsidies to nitrogen and phosphate fertilisers were completely removed in July 1991 and nitrogen price climbed, while the aggregate nutrient consumption declined by 9.9% over the 1991-1992 campaign against that in 1988-1989. The excessive use of pesticides has had adverse effects on the quality of soil and water as well as dire consequences for the agricultural ecology and public health. The intensive use of pesticides, especially in cotton pest control, has led to the proliferation of new pests. The number of cotton pest species soared from 8 in 1965 to 14 in 1980.

The introduction of vegetable crops in the inter-crop period has allowed the polyphagous cotton worm and *Helicoverpa armigera* to maintain their population for two consecutive cotton crops. The increasing use of pesticides has further worsened the problem. Pesticides, insecticides, herbicides, nematocides and fungicides are widely used in Egypt. Insecticides are the largest group of chemicals in use (65%-80% of which are applied to cotton crops). Before the economic reforms, privately owned companies were allowed to import and sell pesticides for non-traditional crops (mainly fruit and vegetables) at free market prices. Chemicals used for non-traditional crops were sold through 10 distributors, each with a network of dealers and technical advisers.

As far as traditional and strategic crops are concerned (cotton, rice, sugar cane and maize), the Ministry of Agriculture and Land Reclamation (MALR) provides some pesticides which have been purchased from domestic producers or importers. The Principal Bank for Development and Agricultural Credit (PBDAC) funds these purchases and stores the chemicals on behalf of MALR.

After the implementation of the reform programme, traditional crops are no longer subject to governmental control. Pesticide distributors and dealers in the private sector have replaced the government in the supply of pesticides and farmers have begun to increasingly apply pesticides to traditional crops, except for cotton. Hence, cotton production and marketing have been liberalised, but pesticides to be used for cotton are still State-controlled. Over the last five years, both consumption and imports of pesticides have fallen from 23.5 thousand tonnes in 1986 to 11.5 thousand tonnes in 1991 and to 6.5/6.8 thousand tonnes in 1993 and 1994, respectively.

In *Algeria*, the environmental policy is continuing to develop. In the agricultural sectors, over the past few years, efforts have been made to halt

the desertification process in the steppes, rainfall-related erosion and the degradation of dams.

In *Lebanon*, the environmental policy remains a constant concern. The main action was initiated in 1995, through a five-year reforestation programme of some 40,000 ha of land.

In *Cyprus*, the agricultural and environmental policies are included in the Strategic Development Plan (1994-1998), which focuses mainly on:

support to farmers who apply eco-friendly methods, through incentives to reduce the use of fertilisers, promote organic farming, introduce extensive farm methods, reduce livestock concentrations, process pig wastes for energy purposes and preserve abandoned agricultural lands;

ecological control of prevention measures and sea contamination actions taken by the Department of Fishery;

ecological monitoring of coastal areas (new species, impact of coastal infrastructures, buildings, etc.);

improvement of forest fire fighting capability;

preparation and implementation of a plan to improve national forest parks.

Apart from the official policies, a national scheme is required to manage groundwater quality and control pumping near coastal areas.

CHAPTER III

Tools and training programmes for tomorrow's agricultural and agri-food practitioners in the Mediterranean countries: CIHEAM Contribution

Introduction

Over the past years, along with more macro-economic assistance programmes, mostly implemented on a bilateral basis, European Mediterranean countries, together with southern and eastern Mediterranean partners, have also promoted more co-operative endogenous development programs, which have included measures to support training, research and, therefore, to sustain human capital.

Moreover, human development became, at the beginning of the nineties, an important policy alternative in reaction to the heavy national resource distribution incurred under stabilisation and structural adjustment programmes.

Human development was meant as a tool to achieve "*adjustment programmes with a human face*".

Consequently, it became more evident that the existence of a highly skilled and educated labour force would favour technology transfer and at the same time this force would itself promote innovative technical knowledge.

There are good reasons for considering new development trends in a common framework.

The Barcelona Declaration of 1995 has established this common framework in the building of an area of "*shared wealth*".

Three major partnership areas were addressed by the said Declaration: policies and security issues, economic and financial co-operation and a social and cultural development.

The latter action focuses also on the development of human capital and in particular on the support of decentralised co-operative programmes.

The development of human and scientific capacity in the Mediterranean region has also, in the past thirty years, been a top priority for an international development organisation, namely the *International Centre for Advanced Mediterranean Agronomic Studies (CIHEAM).*

In fact, CIHEAM, in pursuing its double role of *Donor* and *Scientific Partner,* has been an active promoter of human and social capital development in the Mediterranean region.

Examination of existing higher education programmes and the future needs in the emerging Mediterranean labour markets, especially concerning the agri-food sector, may result very valuable in designing new capacity building programmes.

Prevailing disparate institutional developments and the setting of a common framework must confront a crucial fact: labour markets and higher education institutions, application of the new information and communication technology (ICT), differ across Mediterranean countries.

This observation has led CIHEAM to examine comparative labour markets and advanced agri-food training programmes and institutions in its Mediterranean member states.

This comparative exercise was carried out at an international seminar, "*Advanced Training of Agricultural and Food Managers in the Countries of the Mediterranean Area*", held in Istanbul, Turkey, November 9-11, 1998 which more specifically addressed the problem of interpreting the "*Challenges to the management of knowledge on the eve of the third millennium".*

In this chapter the outcomes of this seminar will be extensively used to address problems and possible solutions for training tomorrow's agricultural and agri-food practitioners.

I. Conventional paradigms

Agriculture and related higher education and research institutions share the same conventional interpretation on how their contribution affects the economic development.

In the case of agriculture the prevailing view of its role in the economic development appears to be based on an incorrect interpretation of two important facts regarding this sector as economic development proceeds (E.Schuh, 1997).

These two important factors are respectively the declining agricultural share of a nation gross domestic product (GDP) and the reduced share of agricultural labour force as the economy develops.

On this matter, E. Schuh argues that policymakers and developers appear to conclude from these inevitable consequences of economic development that the way to promote economic development is to facilitate such long-term trends.

This is to concentrate on the symptoms or consequences of development, in contrast to understanding the underlying economic and technological forces at work.

However, when we turn the attention to research and technology transfer process in agriculture, it becomes apparent that agricultural technology, in contrast to manufacturing technology, cannot be readily transferred to developing economies, but must be adapted.

Adapting technologies and knowledge to the different agricultural production systems, in the specific case of the Mediterranean region, or

elsewhere in developing countries, requires strong investments in research and education, but also in holding a well-trained stock of human resources.

II. Non marketable public goods

Agriculture and its related higher education and research institutions, whether in developed or developing countries, are both promoting economic development even if their contribution to national wealth remains one *of "the best kept secrets."*

In the case of agricultural research, for example, there is a consistent production of various outcomes, which are known as "*non marketable public goods*" such as knowledge, healthy food, environmental protection, etc.

Though considerably important matters, these outcomes are not quantitatively measurable in economic terms, and this in part explains why the general public does not commonly understand them.

Instead, what it is more accountable to general public and policy makers is the growth of food imports in developing countries or the increase in staple food stocks in developed countries.

This type of growth pattern, although deriving from general economic and/or population development, should advocate the cause of agriculture and related research and higher education institutions, but, instead, these contradictory outcomes in some cases contribute to diverting away national or international investments for agricultural research and related higher education.

Nevertheless, in the last three decades developing nations have invested considerable resources in their higher education systems including agriculture related programmes, often with the support of external aid agencies.

In most countries of Northern Africa and the Middle East in the last three decades enrolment ratios have respectively increased from 1 to 10

percent and from 8 to 16 percent. The European Mediterranean countries instead range from 26 to 41 percent.

As a result of their investments in higher education, Mediterranean countries have established a comprehensive infrastructure for advanced training.

However, limited financial resources have hampered the development of a strong continuing education system, particularly in the countries of the southern and eastern Mediterranean rims.

III. Is higher education in crisis?

Despite the clear importance of higher education for economic growth and social development, investment in the sector is in crisis in industrial as well as developing countries throughout the world. (The World Bank)

In all countries higher education is dependent on government funding. In a time of widespread fiscal constrains, industrial as well as developing countries are grappling with the challenge on how to preserve or improve the quality of higher education.

Increased competition of scarce public funds have reduced many governments' capacity to support further public expenditures which negatively affected agricultural public spending and related higher education teaching and research.

The decrease in resources has been particularly acute in Africa and in the Middle East.

According to World Bank data, in the last decade public expenditures per student for higher education in the Middle East and Northern Africa, declined from 3.200 US. $ to 1.900 US $.

The Bank's analyses by world regions, show that 66 percent of the lending for higher education in the past decade went to East and South

Asia, instead the Middle East and Northern Africa accounted together for 7.8 percent, slightly higher than Europe and Central Asia but lower then Africa and Latin America respectively.

Reportedly, an expected effect of the accomplishment of the Euro-Mediterranean free trade area by 2010 will be the one of reducing the flow of money from custom duties and levies in each respective national budget of non European Mediterranean countries.

There are some well-founded warnings that this reduced financial flow could negatively affect also higher education and in this particular case agricultural research.

In programming any future actions for networking and partnership between southern and European Mediterranean countries, in the field of agri-industrial higher education training and research, we do need to carefully evaluate these types of economic externalities, and shape new financial instruments, in order to make financial sustainability of agricultural higher education and research institutions a top priority.

IV. Non conventional paradigms

There is another aspect of economic development, which implies the consideration, in the specific case of agriculture, of the increased share of science and economics required to farm today in a sustainable way. This trend can be applicable to European and non-European Mediterranean countries.

This is the case of the so called *Alternative Agriculture* which represents not a single production system, but the combinations of systems and practices finely tuned to local ecological circumstances, replacing capital and energy inputs with ”*more information*”, as well as more trained labour and time and management skills per unit of production than conventional farming.

Flexibility and timing are accompanying practices towards careful soil preparation (minimum tillage) and judicial application of pesticides at critical stages.

Farming systems in the Mediterranean region are very specific and therefore require substantial scientific, economic and technological knowledge accumulation in order to be more efficient and produce extra food at low cost for the consumers.

In a such a context, even if conventional economic development trends confirm a lower share of the primary sector in a nation's GDP, we need to consider that successful economies are becoming "*knowledge societies*" and thus increasingly less materials and energy intensive.

These factors are being replaced with information and skill custom; tailored to specific situations and problems. Such an approach is revealing *technology adaptive, local and particularised,* depending more on organising information to specific human and environmental needs. (B.Rich, 1994).

In this context it is critically important that training and research programmes are well tuned to the evolving demands of the economy.

V. Social and information capital

The emerging notion of social capital extends the conventional understanding of "co-operation" or collaboration and provides a link with the economic concept of "capital", pertinently indicating the investment or growth potential of groups' abilities to work jointly.

The latter concept identifies also the structure created from collaborative effort as capital.

Well functioning partnership, consortia and networks are in and themselves "*a form of social capital*"(J.E. Fountain, 1997).

How and what can we define for social capital? Like “physical capital and human capital- tools and training that enhance individual productivity- “social capital” refers to features of social organisation, such as networks, norms and trust, that facilitate co-ordination and co-operation for mutual benefit” (J.E. Fountain, 1997).

However, the featuring of networks is also meant to provide decision-makers with important information, which cannot be replaced only by using Internet.

In fact, collaborative networks are performing the critical function of screening for accuracy, importance and implications.

Although open access to information, principally through the use of Internet is an important asset for networks, the derived information *capital* is not a replacement for social capital.

It is evident that social capital increases the ability to build and use information capital because trustful relationships increase information flows and bring added value to information.

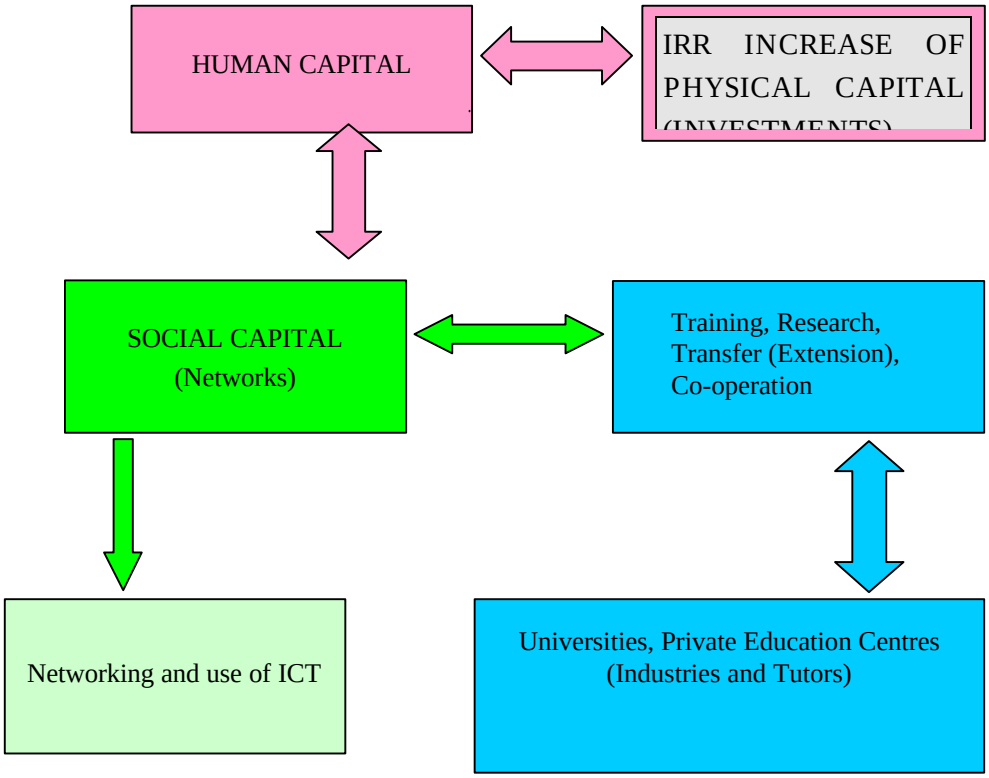
Reportedly, academic literature is raising the question whether the explosive growth of Internet use and information technologies would really make distance and time constraints virtually meaningless.

However, the research evidence, especially on industry networks, is that learning and information sharing is not regardless of the geographic proximity, but is actually an important component of networks.

For this reason, geographic regions that include highly adaptive networks have been also described as “*learning regions*”.

Referring to the specific case of the Mediterranean area, we could also apply the definition of learning region, and in order to enhance education and training at all levels and to make the network of libraries and information services available throughout the region we must promote not only investments in hardware components, but more on software and electronically supported institutional building.

III-1 Social and information capital interaction scheme



Source: CIHEAM

*IRR: Internal Rate of Revenue

VI. Case study: CIHEAM's Regional Action Programme (RAP)

There is a lack of shared vision between Mediterranean policy partners on the direction and implications of the many factors impinging on the development of a true regional programme in areas such as agriculture and the management of renewable natural resources, and no formal agreement on how can we be more fully integrated into decision making and operational mechanisms of the process.

However, as the pace of technological change has intensified, as natural resources have become more scarce, and as information technologies have made linkages among geographically dispersed actors commonplace, the predominant centralised form of economic and scientific co-operation has been changing.

Actors in collaborative networks show an efficient form of collective learning. They learn of and about new technologies, opportunities and challenges more quickly because of the strong interaction within the network.

Based on latter assumption, the recent initiative of CIHEAM and the European Commission to design and finance jointly a four-year (1998-2002) *Regional Action Programme* (RAP), is directed at building a sound and decentralised regional co-operation in the agricultural sector on training, promotion of research and communication of scientific and technical information in the context of economic transition.

This programme not only relies on a sound institutional partnership, moving away from core institutional funding into programme core sponsorship, but also encourages the support of networks of learning and innovation.

This new RAP, which is also the result of a fruitful collaboration between CIHEAM and the European Commission in a previous four year programme (1993-1997), has involved CIHEAM, through its four sub-centres located in Spain, France, Italy and Greece, in successfully developing training programmes which address subjects relevant to Non Community Mediterranean Countries (NCMC).

In fact, this programme through a series of short courses, trainee mobility programmes and co-operative research has helped to provide skills to trainees and enabled them to participate effectively and integrate into national management of renewable natural resources and agricultural and agri-industrial activities.

The fundamental objective of the RAP will be attained through the creation of four partnership programmes on joint regional activities covering themes such as Water and Irrigation management, Rain-fed agriculture, Food and Agricultural Policy and Utilisation and Conservation of Renewable Natural Resources.

However, the implementation of the RAP will involve two distinct phases. The first one (1998-2000) will consist in supporting post graduate training through 12 short courses per year, by promoting and financing co-operative research which will capitalise on eight currently existing thematic networks. It will also favour mobility of trainees (16 scholarships per year), the preparation of seminars, both for policy makers and science related actors, the organisation of studies such as the use of biotechnology or on the aspects concerning disease free plants legislation in the Mediterranean region, and some logistic support measures aiming at the purchasing of laboratory consumable goods.

The second phase (2000-2002) will be characterised by actions aiming at the support of training and mobility as in the first phase, but also at launching network research projects, studies and training on the effects of the Euro- Mediterranean free trade zone and at managing a performant

communication system to improve the access and flow of information between Mediterranean private and public stakeholders.

Activities will be geared to assisting in the creation of a Mediterranean sphere of joint actions on political, administrative and economic issues on these themes, through improved partnership between countries of the Northern, Southern and Eastern littorals.

However, the indigenous capacity for training and research is a necessary but not sufficient condition for higher education to contribute to growth. (The World Bank).

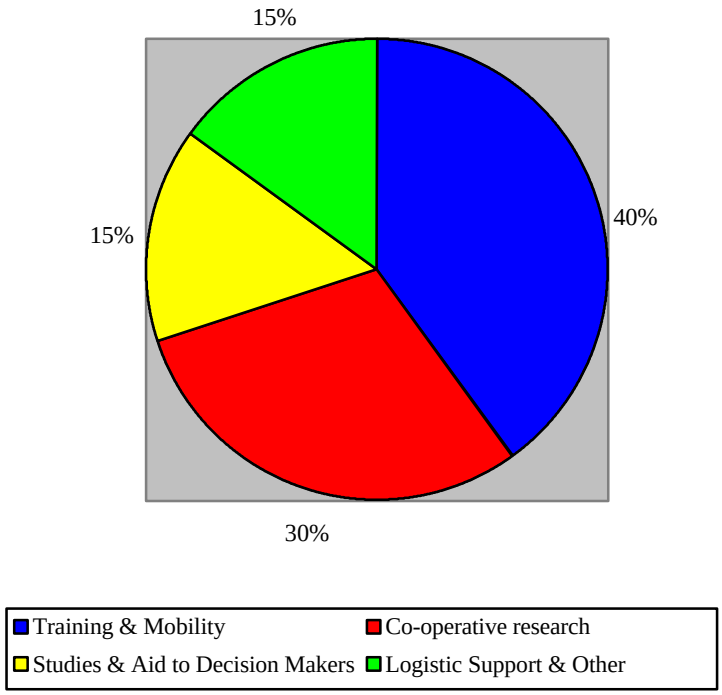
Through the implementing of the RAP, CIHEAM will concur in complementing such a mechanism by promoting a better use of the scientific and technical potential of tertiary institutions.

Such mechanisms include close links with industry in advanced training courses, co-operative research programmes, consultancies, and continuing education programs.

The implementation of this programme will also mean adapting existing CIHEAM activities to agreed regional priorities, fostering capitalisation on infrastructural investments which already exist in the region and enhancing any possible action favouring the improvement of South-South co-operation.

Furthermore, measures to enhance national capacity building will include specific aid on policy and to decision-makers in order to enlighten policy issues concerning the establishment of the Euro-Mediterranean free trade zone by 2010.

III-2. Budget Allocation



Budget allocation percentages show an important component of the RAP on training, mobility and co-operative research; in fact, as whole, they represent 70 percent of the total budget.

The financing of this programme amounts at 10 million ECU's, of which, 6 million have been provided by the European Commission et the remaining 4 million by CIHEAM.

A series of impacts or results are expected through the different phases of the programme. The creation of these RAP's for selected themes, will result in a better understanding of regional planning and implementation

of collaborative continuing education and research networks; in the increasingly efficient south-south and north-south Mediterranean regional co-operation and information exchanges; and on the improvement of the modalities of economic transition through better understanding and co-ordination of regional economies and compatible marketing of agricultural products.

Bearing in mind that the Mediterranean economic environment is affected by scarce financial resources, which is also limiting the formation of human capital, by the modest size of labour markets and the difficulty to take advantage of economies of scale, the only way to maintain a cost-effective training and research programmes may be to organise them on a regional basis.

A. Adapting training programmes to tomorrow's needs

According to a World Bank study, graduate unemployment in developing countries rose sharply during the 1980s and continues to rise. This reflects principally the sluggish growth of aggregate demand for highly skilled labour and the diminished role of the public sector as the main employer of university graduates.

It is commonly agreed that in general higher education and training systems in most Mediterranean countries are centrally managed and are therefore facing some difficulties in adapting training programmes to labour market changes.

Lower responsiveness to adopt or to adapt programmes and training is also linked to the fact that current labour markets, mostly in public employment, are influenced by mechanisms which rely on specific job functions linked to the university degree and seniority.

In other words the system is still driven by the *duality "university degree-job career"*, instead of shifting to the new concept of "*knowledge- job career*".

This job development patterns are more typical of the civil service rather that the modern enterprise.

A recent study of the Institut de la Mediterranée[12], France, shows that in the emerging Mediterranean countries, compared to other emerging countries, there is an increasing number of students in social and human sciences.

Despite a relative exception for Jordan and Algeria, in Morocco for example, law and social and economic science students represent more than 60 percent of university enrolments.

In Egypt about 70 percent of university students are enrolled in human and economic sciences studies of which only 23 percent in accounting and management programmes.

Almost all Mediterranean countries show low rates of student enrolment for technological and science subjects; in the United Kingdom the social sciences account for 44% of enrolment, in Germany 40%, in Italy 58%, and in Spain 54 %.

Reportedly, the expected demand increase for engineers and scientist, due to a fast and global technological transfer, may not be met by the short supply of scientists and engineers in the Mediterranean region, which will negatively affect the region development patterns.

Indeed, today there are only 0,5 scientists and high tech experts every 1000 habitants in Tunisia and 0,8 in Egypt, compared to 2,3 and 1,6 in the Korea and China respectively.

It is evident from these data that the gap existing in the Mediterranean region concerning science and technology and the emerging sector of services should be inverted or at least reduced.

[12] La Méditerranée aux portes de l'an 2000 sous la direction de Jean-Louis Reiffers Editions ECONOMICA, 1997

Teaching and training programmes as well as continuing education should be more consistent with those changes in labour markets and therefore include knowledge from high tech sectors (like EDP, telecommunication, etc) and to develop also knowledge on self empowerment and problem solving.

B. Advanced training for agricultural and food managers

In a world where continuing education becomes an important asset for national economic development, and where obtaining a university degree does not empower the person for a pre determined professional career, it becomes necessary to rethink our strategies and to design new training programmes which will eventually integrate different disciplines that today are not necessarily linked together.

In fact, there is clear evidence that agricultural practitioners or agricultural entrepreneurs will require a more inter disciplinary knowledge in order to carry out their work. They will need to couple advanced technical knowledge and management, but also to include problem solving approaches and use of modern information and communication in order to improve their networking activities.

However, it is also necessary to have Universities that are more open to these changes, which reflect the actual economic context, and that can foster the flow of information and collaboration with the business communities.

As economic and technological changes demand the Institutional actors to be more adaptable or flexible, an inter-governmental organisation, namely CIHEAM, with its double role as *Donor* and *Scientific partner* must also englobe these changes and provide and adapt new training inputs.

There are also a number of questions arising from this new economic context which involve the activities of CIHEAM in the field of continuing education and its complementarity to national programmes.

These questions refer in particular to how new technologies and knowledge will be integrated into the training process; what role could be played by agri industrial business communities, particularly as regards new training systems, what type of network co-operation should be established among development, financial and scientific institutional actors.

To analyse and provide some answers to these questions CIHEAM has organised an international seminar on "*Advanced training of agricultural and food managers in the countries of the Mediterranean area*", which gathered together about seventy experts from the Mediterranean countries reflecting a diversity of economic and institutional contexts, such as representatives from universities, international development and financial institutions, leading business operators in the field of agri-industry, agricultural managers from public and private sectors and representatives of the Mediterranean farming community.

The seminar which lasted two and half days enabled the participants to provide analysis and answers to a set of question around four major topics and organised through five round tables, each animated by a facilitator.

These four major topics were centred on 1) *new job descriptions and new professions*, 2) *future training operators and new programmes*, 3) *new pedagogical approaches: tools and methods*, 4) *new forms of co-operation: networks*, and constituted a framework where a series of questions have been addressed and to which all participants contributed to the answers.

Pertinently, the analysis of the answers to the first topic reveals that, the future outlook for professions in the agri-food sector shows a move towards an increase in demand for project or financial managers with a sound knowledge of agri-industry investment policies, project financing, as well as for specialists in marketing and also innovation processes and science based extension agents.

The required professional skills will focus more on relationship and communication abilities, technical competence and capability to analyse complex situations and solve them using network activities.

With reference to the second topic there was a clear emergence of a request to adapt training programmes to user's needs coupled with flexibility, multi-disciplinarity and to integrating theory and practice better.

In fact, the new programmes should well combine academic and professional skills, public and private institutions inputs and reach a substantial degree of international and inter-regional co-operation.

The outcomes regarding the new pedagogical approaches have revealed the emergence of an extended use of modern information and communication technologies (ICT) as a tool to support network activities and institutional building, to tailor customer programmes using a multi sources expertise and to reduce cost of teaching per trainer.

Apart from the relevant use of ICT in formulating the new programmes, there is also the necessity to change pedagogical approaches, which should move more towards tutorship and counselling rather than the conventional academic trainer, and also foster practical training (learning by doing) and associating group interactive learning tools.

An important component of the updating process for any training activity is the aspect of co-operative. Among the Mediterranean partners there is a clear need to establish educational consortia between private and public institutions in order to link training activities and research to speed up technological changes and increase the effects of training and research on innovation. Through co-operative actions there could be established, for example, an observatory on labour markets in the field of agronomic sciences and agro-industry to plan training programmes better.

However, besides the willingness and necessity to co-operate in order to reach better economies of scale and institutional complementarities,

there are also some constrains which are linked to the limited human and financial resources in the south and in the east of the Mediterranean area, to institutional and individual inertia, and to difficulties in co-ordination.

VII. Future perspectives

The major outcomes of the seminar will contribute in designing new development patterns for CIHEAM and also for national or international institutions involved in the governance of co-operative and regional continuing education programmes.

These new patterns will require CIHEAM to build a mid term work plan which will include new learning tools and programmes, to adapt supply of tools and training programmes to the emerging demand and to continue to serve as a catalyst for the Mediterranean region.

However, all participants at the seminars stressed the strong emergence of ICT and the expected advantages of application of new information and communication technologies to structure learning systems.

Considering this new working context and the increasing need to couple economy of scale with the widespread diffusion of knowledge , a Mediterranean "*Virtual University*" (MVU) could be envisaged to face these new challenges.

Based on the previous concept of learning regions the MVU could be a concrete tool in the creation of common regional continuing education programmes between the two rims.

Furthermore, the MVU could capitalise on existing institutional and expert networks fostered by CIHEAM, in order to produce a pilot programme for distance learning, or CD-ROM's to support short courses within a continuing education framework or even supporting the distant tutoring of doctorates and research theses.

Any new action or training programme, whether with conventional or distance tools, should consider, basically, two working schemes.

In fact, addressing the typical university and post graduate training will mean adapting to a strong demand for long courses stated by degrees such as Masters or PhD; instead any specialised training, within a continuing education framework, will require a strong correlation with labour markets.

Nevertheless, combining the two systems will not prevent an institution such as CIHEAM from working alongside national systems and will not reduce complementarity and flexibility, which are both needed to face quick technological changes.

However, the new working environment will involve operating more, with the co-operation of four CIHEAM training institutes, within an open institutional and expert network and to constantly screen and evaluate the pertinence of the training programmes.

In recalling these perspective remarks from Mr. Jean-Claude Flamant, President of CIHEAM Scientific Advisory Committee, it is worth pointing out the three attitudes actors will have to adopt to face the future.

These are listed as passive, anticipatory or pro-active.

Any pro-active actions refer to the actor as initiator of changes in his economic and human environment.

However, in a world where the future is very uncertain and where all the dynamic is towards globalisation, it is commonly agree that only by using *locally specific resources* , will actors be pro-active in building their future.

Translating this pro-active attitude to CIHEAM, we shall consider the latter as an active partner for the Mediterranean actors and as a *specific resource* for this region of the world.

Major indicators of agri-food development in Mediterranean and Arab countries

Introduction

The following statistical section briefly summarises the major indicators of agri-food development in Mediterranean and Arab countries.

Data are based on population growth, economy, resources, production factors, consumption and international trade.

Given the poor availability of data in most of the above countries and for comparative purposes, the selection of indicators was confined to those which are closely related to population growth, urbanisation, global economic and agricultural growth, food consumption and international trade.

Methodological notes

1. Data source

Agricultural statistics (land use, production and trade) have been compiled by the UN Food and Agriculture Organisation (FAO). Data have been gathered by official bodies in different countries and complemented, if necessary, by FAO projections based on temporary or unofficial information.

Macro-economic data about the population, national budgets, the global trade, etc.. have been derived from the UN statistics published in yearbooks (statistical, national budget, population growth and international trade yearbooks) or in publications edited by the World Band or the IMF.

2. Geographical breakdown

In order to facilitate the analysis, the following geographical groupings have been suggested and are illustrated in the various tables. They will help compare data flows analysed for the Mediterranean, the Northern and Southern areas and the Arab countries.

Mediterranean: Algeria, Albania, Bahrein, Bosnia and Herzegovina, Croatia, Cyprus, France, Former Yugoslavian Macedonia, Greece, Iraq, Israel, Italy, Jordan, Kuwait, Lebanon, Libya, Malta, Morocco, Oman, Portugal, Qatar, Saudi Arabia, Slovenia, Syria, Tunisia, Turkey, United Arab Emirates, Yemen, and Yugoslavia.

Northern Mediterranean: Albania, Bosnia and Herzegovina, Croatia, Cyprus, France, Former Yugoslavian Macedonia, Greece, Italy, Malta, Portugal, Slovenia, Spain, Turkey and Yugoslavia.

Southern Mediterranean: Algeria, Bahrein, Egypt, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Qatar, Saudi Arabia, Syria, Tunisia, United Arab Emirates and Yemen.

Arab countries: the whole Southern Mediterranean except for Israel, plus four Non-Mediterranean Arab countries: Djibouty, Mauritania, Somalia and Sudan.

3. Classification of countries in the tables:

Geographical groupings: World, Mediterranean, Northern Mediterranean, Southern Mediterranean, Arab countries.

Mediterranean EU Member States: France, Greece, Italy, Portugal and Spain.

Other Northern Mediterranean countries: Albania, Bosnia and Herzegovina, Croatia, Cyprus, Macedonia, Malta, Slovenia, Turkey and Yugoslavia.

Maghreb countries: Algeria, Libya, Morocco and Tunisia.

Other Southern Mediterranean countries: Bahrein, Egypt, Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syria, United Arab Emirates and Yemen.

Other non-Mediterranean Arab countries: Djibouti, Mauritania, Somalia and Sudan.

Place of the Mediterranean in the World.

Table 1. Population, growth rate, urbanisation, agriculture ratio to employment, 1997

Country	Total population	Growth rate 1965-97	Urban population/ total population	Rural population/ total population	Agricultural pop./ total population	Agricult. labour force/ total labour force	Inhabitants/ agricult. employees
	1000 htt	%	%	%	%	%	
World	**5.848.731**	**1,76**	**46,11**	**53,89**	**43,84**	**46,04**	**4**
Mediterranean C	**495.419**	**1,81**	**64,06**	**35,94**	**20,98**	**22,25**	**11**
North Med.	**265.901**	**1,15**	**68,45**	**31,55**	**14,32**	**18,46**	**12**
South Med.	**229.518**	**2,82**	**58,99**	**41,02**	**28,70**	**28,01**	**10**
Arab Countries	**264.879**	**2,80**	**54,32**	**45,68**	**34,78**	**35,25**	**8**
France	58.542	0,57	75,03	24,98	3,89	3,89	57
Greece	10.522	0,65	59,58	40,42	14,88	18,45	13
Italy	57.241	0,29	66,77	33,23	6,15	6,15	37
Portugal	9.802	0,22	36,53	63,47	15,84	14,13	14
Spain	39.717	0,67	76,92	23,08	8,70	8,51	27
Albania	3.422	1,91	37,96	62,01	50,15	50,18	4
Bosnia H.	3.784	0,00	41,89	58,11	6,58	6,58	33
Croatia	4.498	0,00	56,54	43,44	10,32	10,33	21
Cyprus	766	0,86	55,22	44,91	9,92	10,00	21
Macedonia	2.190	0,00	60,68	39,32	15,07	15,12	14
Malta	371	0,61	89,76	10,24	1,89	2,16	124
Slovenia	1.922	0,00	51,82	48,18	2,60	2,69	74
Turkey	62.774	2,21	71,62	28,38	32,61	48,37	4
Yugoslavia F.R.	10.350	0,00	57,88	42,12	22,60	22,59	9

o/o

Country	Total population	Growth rate 1965-97	Urban population/ total population	Rural population/ total population	Agricult. pop./ total population	Agricult. labour force/ total labour force	Inhabitants/ agricult. employees
	1000 htt	%	%	%	%	%	
Algeria	29.473	2,87	57,08	42,92	24,64	25,02	13
Libyan A.J.	5.784	4,05	86,26	13,74	7,11	7,09	49
Morocco	27.518	2,29	53,21	46,79	39,51	38,55	7
Tunisia	9.326	2,21	63,35	36,65	25,70	25,70	10
Bahrain	582	3,54	91,07	8,93	1,37	1,15	194
Egypt	64.465	2,26	45,15	54,85	38,74	35,33	8
Iraq	21.177	3,10	75,43	24,57	11,64	11,64	32
Israel	5.781	2,57	90,90	9,10	3,08	3,08	77
Jordan	4.520	4,79	72,48	27,52	12,65	12,37	28
Kuwait	1.731	4,15	97,28	2,77	1,04	1,01	247
Lebanon	3.144	1,19	88,39	11,64	4,58	4,60	64
Oman	2.401	4,26	78,84	21,16	38,48	38,51	10
Qatar	569	6,77	91,74	8,08	1,58	1,60	114
Saudi Arabia	19.494	4,48	83,95	16,05	12,24	12,24	25
Syrian A.R.	14.951	3,28	53,11	46,89	29,26	29,25	11
U.A. Emirates	2.308	9,06	84,66	15,34	5,59	5,57	36
Yemen	16.294	3,26	35,23	64,77	53,63	53,63	6
Djibouti	634	5,69	82,49	17,51			
Mauritania	2.392	2,47	53,72	46,28	53,05	53,05	4
Somalia	10.217	2,79	26,36	73,63	72,49	72,49	3
Sudan	27.899	2,58	33,18	66,82	63,70	63,71	4
Med./World %	**8,47**						

Source: Medagri 1999, based on FAO data.

Table 2. Gross Domestic Product, economic growth, agriculture ratio to the GDP

Country	Year	GDP	Growth rate 1990-95	GDP	GDP agricultural / GDP	Agricultural GDP/. agricult employee	Agricultural GDP/ inhabitant	Exchange rate *
		millions $	%	$	%	$	$	MU p 1 $
France	1997	1.394.127	1,00	23.814	2	27.309	476	5,84
Greece	1997	120.948	1,10	11.495	7	10.371	816	273,06
Italy	1997	1.145.382	1,00	20.010	3	22.126	600	1.703,10
Portugal	1996	107.133	0,80	10.923	3	4.162	295	154,24
Spain	1997	531.289	1,10	13.377	3	10.939	401	146,41
Albania	1995	2.192	1,40	648	56	1.453	363	92,70
Bosnia H.								
Croatia	1995	18.081		4.014	12	9.907	482	5,23
Cyprus	1996	8.873	8,91	11.736	5	10.791	528	0,47
Macedonia	1994	2.720		1.271				50,00
Malta	1997	3.323	1,17	8.956	4	38.765	313	0,39
Slovenia	1996	18.859	9,98	9.802	5	36.267	490	135,36
Turkey	1996	176.218	3,20	2.852	16	1.997	456	81.405,00
Yugoslavia F.R.								
Algeria	1995	41.158	0,10	1.464	13	2.279	190	47,66
Libyan A.J.	1992	30286		6.206	6	16.049	385	0,30
Morocco	1997	33.276	1,20	1.209	14	1.121	169	9,53
Tunisia	1997	19.004	3,90	2.038	14	2.949	289	1,11
Bahrain	1996	5.361	4,93	9.405	1	21.444	113	0,38

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Country	Year	GDP	Growth rate 1990-95	GDP/caput	GDP agricultural / GDP	Agricultural GDP/. agricult employee	Agricultural GDP/ inhabitant	Exchange rate *
		millions $	%	$	%	$	$	MU p 1 $
Egypt	1997	75.502	1,30	1.171	20	1.786	234	3,39
Iraq								
Israel	1997	97.930	6,40	16.940	9	117.516	1.525	3,45
Jordan	1996	7.259	8,20	1.662	8	3.585	133	0,71
Kuwait	1996	30.984	12,20	18.366	1	35.411	147	0,30
Lebanon	1995	11.143		3.703	10	22.740	370	1.621,40
Oman	1997	16.153	6,00	6.728	11	7.360	760	0,38
Saudi Arabia	1995	125.266	1,70	6.862	6	8.777	377	3,75
Qatar	1995	7.515	0,84	13.714	1	15.030	137	3,64
Syrian A.R.	1996	59.922	7,40	4.112	11	4.695	432	11,23
U.A. Emirates	1996	44.620		19.743	2	13.944	395	3,67
Yemen	1995	4.790		319	22	387	70	
Djibouti	1995	495		824	3		26	1,00
Mauritania	1995	904	4,00	398	27	419	107	151,85
Somalia								
Sudan					10			

* MU p 1 $ = ... national monetary unit per 1 US $.

Source: Medagri 1999, based on IMF, World Bank, FAO and national data.

Table 3. Cultivated areas, irrigated areas, means of production, 1996

Country	Arable land & permanent crops	Cultivated areas per 1000 htt	Cultivated areas per agricultural employee	Irrigated areas/ cultivated areas	Cultivated areas per tractor	Fertilizers per cultivated areas
	1000 ha	ha	ha	%	ha/tract.	kg/ha
World	**1.508.824**	**262**	**1,2**	**17,16**	**53**	
Mediterranean C.	**133.244**	**278**	**2,8**	**20,58**	**21**	**108**
North Med.	**87.393**	**335**	**3,8**	**16,48**	**15**	**131**
South Med.	**45.851**	**209**	**1,8**	**28,39**	**86**	**64**
Arab Countries	**59.914**	**238**	**1,7**	**25,06**	**119**	**48**
France	19.493	334	19,0	8,36	14	252
Greece	3.961	378	4,6	33,53	12	138
Italy	10.768	188	6,5	25,17	6	175
Portugal	2.900	296	4,3	21,79	14	88
Spain	20.129	507	14,6	17,52	19	91
Albania	702	206	0,8	48,43	64	16
Bosnia H.	650			0,31	17	8
Croatia	1.233	274	4,1	0,00	318	141
Cyprus	143	189	4,1	27,97	6	197
Macedonia						
Malta	11	59	0,1	9,09	20	91
Slovenia	288	150	6,7	0,69	3	243
Turkey	27.115	439	1,9	15,44	32	63
Yugoslavia F.R.						
Algeria	8.029	279	3,7	6,91	82	6
Libyan A.J.	2.115	378	24,3	22,22	53	49

o/o

Country	Arable land & permanent crops	Cultivated areas per 1000 htt	Cultivated areas per agricultural employee	Irrigated areas/ cultivated areas	Cultivated areas per tractor	Fertilizers per cultivated areas
	1000 ha	ha	ha	%	ha/tract.	kg/ha
Morocco	9.573	354	2,3	13,14	208	29
Tunisia	4.878	533	6,2	7,40	81	19
Bahrain	4	16				150
Egypt	3.283	52	0,4		32	345
Iraq	5.780	280	9,9	60,99	149	56
Israel	437	153	0,2	45,54	14	238
Jordan	410	94	2,3	18,29	53	44
Kuwait	5	3	0,6		50	200
Lebanon	310	101	8,2	28,39	46	170
Oman	63	59	0,1	98,41	107	190
Qatar	15	79	0,1	86,67	188	61
Saudi Arabia	3.830	203	4,7	38,59	391	74
Syrian A.R.	5.502	378	4,1	19,79	56	76
U.A. Emirates	74	33	0,7	91,89	125	486
Yemen	1.543	98	0,6	31,43	242	8
Djibouti						
Mauritania	480	206	0,9	10,21	1.424	8
Somalia	1.020	206	0,2	19,61	556	
Sudan	13.000	476	1,9	14,97	1.230	4
Med./World %	**8,83**					

Source: Medagri 1999, based on FAO data.

Table 4. Main agricultural products, 1997

(1000 T)

Country	Cereals	Vegetables	Fruits	Milk	Meat	Sugar	Olive oil
World	**2.083.072**	**594.420**	**426.855**	**545.622**	**220.236**	**124.192**	**2.206**
Mediterranean C.	**186.937**	**95.257**	**76.829**	**72.389**	**22.419**	**12.949**	**2.176**
North Med.	**152.659**	**62.876**	**57.969**	**62.650**	**18.341**	**11.092**	**1.903**
South Med.	**34.278**	**32.381**	**18.861**	**9.739**	**4.078**	**1.857**	**274**
Arab Countries	**39.290**	**31.678**	**18.352**	**15.201**	**4.492**	**2.424**	**274**
France	63.492	7.886	10.193	25.630	6.321	5.148	2
Greece	4.786	4.059	3.578	1.790	525	288	290
Italy	19.910	13.662	15.143	11.122	3.997	1.650	600
Portugal	1.614	2.102	1.966	1.840	706	27	45
Spain	19.272	10.650	14.010	6.650	3.986	1.158	769
Albania	628	449	105	1.000	118	3	3
Bosnia H.	324	566	86	205	29	2	
Croatia	2.952	317	594	594	111	90	2
Cyprus	141	132	272	174	95		1
Macedonia	593	487	347	192	48	8	
Malta	7	80	17	49	17		0
Slovenia	547	108	304	593	178	60	0
Turkey	29.677	21.026	9.572	10.761	1.183	2.277	190
Yugoslavia F.R.	8.715	1.353	1.782	2.049	1.028	382	0
Algeria	1.080	2.397	1.168	880	480		18
Libyan A.J.	321	618	247	120	131		10
Morocco	4.110	3.232	2.386	1.015	514	438	45

o/o

Country	Cereals	Vegetables	Fruit	Milk	Meat	Sugar	Olive oil
Tunisia	1.105	1.795	835	632	183	37	100
Bahrain		13	25	20	13		
Egypt	17.650	11.505	5.781	2.761	979	1.230	
Iraq	2.211	2.916	1.474	337	120	2	
Israel	152	1.798	1.584	1.170	285		0
Jordan	98	1.186	393	153	112		14
Kuwait	2	86	2	38	62		
Lebanon	74	967	1.244	187	80	22	7
Oman	5	167	202	83	27		
Qatar	4	43	14	27	20		
Saudi Arabia	2.530	2.395	1.041	588	589		
Syrian A.R.	4.282	1.964	1.691	1.466	258	128	80
U.A. Emirates	7	775	303	60	82		
Yemen	646	526	471	200	145		
Djibouti	0	22		12	8		
Mauritania	155	9	38	299	58		
Somalia	303	73	206	2.220	154	18	
Sudan	4.706	990	831	4.101	479	549	
Med./World %	**8,97**	**16,03**	**18,00**	**13,27**	**10,18**	**10,40**	**98,68**

Source: Medagri 1999, based on FAO data.

Table 5. Agricultural products growth between 1981-1985 and 1991-1995 (%)*

Country	Cereals	Vegetables	Fruits	Milk	Meat	Sugar	Olive oil
World	**1,17**	**3,21**	**1,95**	**0,79**	**2,91**	**1,44**	**1,02**
Mediterranean C.	**2,43**	**2,00**	**0,83**	**0,83**	**2,54**	**1,11**	**1,05**
North Med.	**1,76**	**1,83**	**0,17**	**0,64**	**2,36**	**0,83**	**0,72**
South Med.	**5,44**	**2,39**	**3,57**	**2,28**	**3,46**	**2,95**	**2,95**
Arab Countries	**5,28**	**2,24**	**4,21**	**1,83**	**2,97**	**2,67**	**2,96**
France	1,08	0,93	-2,08	-0,83	1,10	0,37	4,72
Greece	0,19	0,38	0,54	0,99	-0,18	-0,08	1,35
Italy	0,52	-0,13	-0,77	0,09	0,88	1,08	0,20
Portugal	1,86	1,60	0,25	5,84	3,26	-1,24	-0,22
Spain	-0,29	1,43	0,74	0,13	2,69	-0,86	1,21
Albania	-5,28	0,28	-5,44	6,22	5,76	-25,09	-7,03
Bosnia H.							
Croatia							
Cyprus	5,25	1,84	-1,60	5,61	5,97		3,25
Macedonia							
Malta	-3,30	0,39	2,14	-0,83	4,69		-6,22
Slovenia							
Turkey	1,30	3,21	1,63	1,09	2,45	1,50	-0,87
Yugoslavia F.R.							
Algeria	2,63	7,86	0,60	0,29	6,13		0,01
Libyan A.J.	0,63	1,55	1,53	0,16	-0,87		-10,74
Morocco	2,78	6,48	3,39	1,58	5,90	1,82	3,12

o/o

Country	Cereals	Vegetables	Fruit	Milk	Meat	Sugar	Olive oil
Tunisia	1,81	3,56	3,41	5,83	2,82	8,22	4,39
Bahrain		4,66	3,59	9,88	3,28		
Egypt	5,80	1,83	6,19	2,63	4,36	3,87	
Iraq	3,64	-0,02	2,88	-3,54	-7,55	-15,37	
Israel	-1,49	4,65	-2,99	2,93	2,37		-1,85
Jordan	3,87	5,41	10,80	12,37	6,97		7,61
Kuwait	2,34	1,58	0,45	-4,82	-3,23		
Lebanon	10,65	7,98	5,19	3,48	0,56	7,85	-2,35
Oman	12,40	-1,30	4,28	4,88	4,65		
Qatar	14,15	9,40	2,92	14,47	6,14		
Saudi Arabia	16,36	5,56	4,46	6,98	7,40		
Syrian A.R.	6,95	-5,80	4,82	1,83	0,78	1,15	4,11
U.A. Emirates	3,09	8,44	12,83	6,43	6,37		
Yemen	1,52	2,87	6,55	3,29	2,58		
Djibouti	7,89	1,18		4,68	3,91	11,61	
Mauritania	9,52	2,24	4,00	2,13	1,10		
Somalia	-4,82	4,72	0,67	-1,55	0,73	-7,63	
Sudan	4,38	0,96	0,40	3,30	0,22	2,51	

* Annual mean growth rate between the means of 1981-85 and 1991-1995.

Source: Medagri 1999, based on FAO da

Table 6. Food consumption, 1996

(kg / year / person)

Country	Cereals (except beer)	Roots and tubers	Sweeteners	Pulses	Vegetables	Fruits
France	113,8	72,5	36,7	2,1	123,5	95,9
Greece	149,6	66,4	31,3	5,2	246,1	184,4
Italy	157,6	37,2	29,2	5,5	168,4	141,3
Portugal	127,4	136,1	34,4	4,7	161,3	124,6
Spain	103,3	99,0	30,3	7,3	134,4	116,0
Albania	147,1	25,0	18,1	4,8	118,7	40,5
Bosnia H.						
Croatia	101,3	118,1	27,8	5,3	85,5	106,5
Cyprus	113,9	34,2	47,5	4,2	106,7	150,1
Ex-Macedonia Y.R.	126,3	41,5	31,0	5,3	124,4	100,9
Malta	151,1	74,9	52,9	5,1	164,7	100,8
Slovenia	137,2	153,8	16,5	2,6	84,7	92,2
Turkey	225,9	61,6	30,5	12,3	183,3	151,9
Yugoslavia F.R.						
Algeria	230,7	36,5	28,4	6,2	64,5	56,4
Libyan A.J.	193,7	19,7	31,1	4,6	98,3	77,8
Morocco	265,8	35,8	35,1	7,4	80,0	84,7
Tunisia	222,8	26,9	31,3	8,6	143,9	103,6
Bahrain						
Egypt	248,4	25,1	29,8	8,2	138,5	107,9

o/o

Country	Cereals (except beer)	Roots and tubers	Sweeteners	Pulses	Vegetables	Fruits
Iraq	132,1	16,9	12,4	2,2	103,8	87,4
Israel						
Jordan	153,2	29,6	36,3	2,8	180,1	97,9
Kuwait	127,6	21,7	39,1	9,0	142,4	135,7
Lebanon	137,9	58,1	34,2	13,6	232,5	262,5
Oman						
Qatar						
Saudi Arabia	156,7	17,6	28,0	5,8	107,9	123,1
Syrian A.R.	230,5	19,8	38,0	5,1	84,8	122,0
U.A. Emirates	125,7	27,9	33,8	9,0	212,9	203,1
Yemen	166,2	10,3	22,9	5,7	27,6	32,4
Djibouti	116,5	2,7	39,1	1,0	36,9	4,5
Mauritania	174,0	4,0	30,2	8,7	10,0	12,6
Somalia						
Sudan	162,3	5,2	15,4	5,5	26,3	30,8

Source: Medagri 1999, based on FAO data.

Table 6a. Food consumption, 1996 (kg / year / person)

Country	Meat	Fish and sea food	Milk (except butter)	Oils and fats	Alcoholic beverages
France	101,2	27,9	256,2	35,2	109,0
Greece	80,3	25,6	239,8	30,8	59,7
Italy	84,3	23,1	254,2	34,9	79,5
Portugal	84,1	58,7	175,6	30,1	137,9
Spain	99,7	37,1	161,1	30,8	108,5
Albania	38,0	1,1	300,0	11,4	20,0
Bosnia H.					
Croatia	30,7	3,4	161,3	13,4	112,4
Cyprus	111,6	19,8	202,4	19,1	59,1
Macedonia	44,6	3,2	90,2	14,4	38,3
Malta	81,4	35,7	200,0	21,1	60,0
Slovenia	100,1	5,9	205,7	21,4	150,8
Turkey	20,7	9,4	143,6	21,0	11,9
Yugoslavia F.R.					
Algeria	19,8	3,9	92,9	18,0	3,5
Libyan A.J.	23,6	5,5	75,4	29,9	0,0
Morocco	16,4	8,2	29,4	15,1	6,2
Tunisia	20,3	7,7	73,7	20,1	7,0
Bahrain					
Egypt	17,5	6,6	38,4	9,8	0,7

o/o

Country	Meat	Fish and sea food	Milk (except butter)	Oils and fats	Alcoholic beverages
Iraq	7,4	1,1	16,8	27,6	3,9
Israel					
Jordan	30,8	4,0	39,0	17,4	1,1
Kuwait	74,9	13,1	206,4	14,7	0,0
Lebanon	31,5	0,7	86,0	22,3	20,4
Oman					
Saudi Arabia	46,0	6,3	94,8	14,7	0,7
Qatar					
Syrian A.R.	21,6	0,9	89,1	18,2	1,0
U.A. Emirates	75,0	26,3	159,2	15,2	5,6
Yemen	11,3	5,6	25,2	8,0	1,2
Djibouti	16,2	2,3	53,2	13,8	3,8
Mauritania	20,2	16,6	144,8	10,5	0,1
Somalia					
Sudan	17,9	1,7	141,6	8,5	27,3

Source: Medagri 1999, based on FAO data.

Table 7. International trade of agricultural products as part of the total trade, 1996

Country	Total imports TI	Total exports TE	Agricultural imports AI	Agricultural exports AE	(ET-IT)/ (ET+IT)	(AE-AA)/ (AE+AI)	(AE-AI)/ (AE+AI)	AE / AI	AI / TI	AE / TE
	millions $	millions $	millions $	millions $	%	%	%	%	%	%
Mediterranean C.	**924.164**	**921.373**	**109.297**	**89.676**	**-0,15**	**99,70**	**-9,86**	**82,05**	**11,83**	**9,73**
North Med.	**751.948**	**732.697**	**82.495**	**84.100**	**-1,30**	**97,44**	**0,96**	**101,95**	**10,97**	**11,48**
South Med.	**172.216**	**188.675**	**26.803**	**5.576**	**4,56**	**109,56**	**-65,56**	**20,80**	**15,56**	**2,96**
Arab Countries	**144.675**	**170.862**	**25.500**	**5.145**	**8,30**	**118,10**	**-66,42**	**20,17**	**17,63**	**3,01**
France	292.936	304.699	27.619	40.402	1,97	104,02	18,79	146,28	9,43	13,26
Greece	26.935	11.243	3.867	3.657	-41,10	41,74	-2,79	94,57	14,36	32,53
Italy	206.788	250.776	25.571	16.889	9,61	121,27	-20,45	66,05	12,37	6,73
Portugal	34.145	23.453	4.315	1.487	-18,56	68,69	-48,73	34,47	12,64	6,34
Albania	876	270	310	20	-52,86	30,84	-87,69	6,56	35,43	7,54
Spain	121.911	102.129	13.160	14.964	-8,83	83,77	6,42	113,71	10,79	14,65
Bosnia H.			348	4			-97,80	1,11		
Croatia	7.788	4.512	898	496	-26,63	57,94	-28,89	55,17	11,53	10,98
Cyprus	3.984	1.392	993	832	-48,21	34,94	-8,85	83,74	24,93	59,75
Macedonia	1.627	1.147	285	251	-17,28	70,53	-6,32	88,12	17,53	21,90
Malta	2.803	1.583	287	31	-27,83	56,46	-80,66	10,70	10,24	1,94
Slovenia	9.421	8.370	832	365	-5,91	88,84	-38,96	43,93	8,83	4,36
Turkey	42.734	23.123	4.008	4.700	-29,78	54,11	7,95	117,27	9,38	20,33
Yugoslavia F.R.										
Algeria	10.878	9.931	2.671	71	-4,55	91,29	-94,84	2,65	24,55	0,71
Libyan A.J.	4.987	9.803	1.289	46	32,56	196,57	-93,17	3,54	25,85	0,47

o/o

Country	Total imports TI	Total exports TE	Agricultural imports AI	Agricultural exports AE	(ET-IT)/ (ET+IT)	(AE-AA)/ (AE+AI)	(AE-AI)/ (AE+AI)	AE / AI	AI / TI	AE / TE
	millions $	millions $	millions $	millions $	%	%	%	%	%	%
Morocco	8.257	4.745	1.698	896	-27,01	57,47	-30,93	52,75	20,56	18,87
Tunisia	7.746	5.517	820	322	-16,81	71,22	-43,57	39,31	10,59	5,84
Bahrain	4.274	4.700	334	16	4,76	109,99	-90,96	4,73	7,83	0,34
Egypt	13.020	3.534	3.862	521	-57,30	27,14	-76,22	13,49	29,66	14,75
Iraq	1.900	400	995	8	-65,22	21,05	-98,42	0,80	52,38	1,99
Israel	29.584	19.149	1.891	1.162	-21,41	64,73	-23,87	61,46	6,39	6,07
Jordan	4.291	1.816	704	182	-40,52	42,32	-58,86	25,90	16,41	10,04
Kuwait	8.374	14.890	1.311	73	28,01	177,81	-89,42	5,58	15,66	0,49
Lebanon	7.560	1.018	1.203	129	-76,26	13,47	-80,67	10,70	15,91	12,65
Oman	4.727	7.337	853	223	21,64	155,23	-58,53	26,16	18,05	3,04
Saudi Arabia	27.765	56.554	4.728	338	34,14	203,69	-86,67	7,14	17,03	0,60
Qatar	3.160	4.104	302	16	13,00	129,88	-90,05	5,23	9,56	0,38
Syrian A.R.	5.380	3.990	845	728	-14,83	74,17	-7,46	86,11	15,71	18,23
U.A. Emirates	28.954	39.396	2.128	803	15,28	136,06	-45,22	37,72	7,35	2,04
Yemen	1.360	1.790	1.167	43	13,65	131,61	-92,93	3,66	85,84	2,39
Djibouti	308	23	91	5	-86,10	7,47	-89,95	5,29	29,59	20,96
Mauritania	250	568	158	40	38,88	227,20	-59,23	25,60	63,07	7,11
Somalia	170	150	65	76	-6,25	88,24	7,67	116,62	38,30	50,62
Sudan	1.314	595	274	610	-37,66	45,28	37,95	222,30	20,89	102,55

Source: Medagri 1999, based on FAO data.
Standardized total balance = (total exports – total imports) / (total exports + total imports) * 100
Standardized total balance = (agricultural exports - agricultural imports) / (agricultural exports +agricultural imports) * 100

Table 8. Import structure per main region of origin, 1995

Country	World millions $	Europ. Union %	USA-Canada %	Japan %	OPEC %
Mediterranean C.	**858.472,7**	**59,78**	**8,39**	**3,81**	**4,86**
North Med.	**705.855,3**	**63,26**	**7,05**	**3,02**	**4,66**
South Med.	**152.617,4**	**43,66**	**14,58**	**7,48**	**5,81**
Arab Countries	**126.251,8**	**41,82**	**13,37**	**8,35**	**7,24**
France	272.595,6	64,00	8,40	3,50	3,00
Greece	25.266,3	67,80	3,50	3,80	5,30
Italy	199.781,5	61,70	5,70	2,20	5,50
Portugal	33.393,7	74,40	3,60	2,20	5,10
Spain	113.060,9	65,10	7,20	3,40	5,50
Albania					
Bosnia H.					
Croatia	7.508,8	62,10	2,80	1,10	4,10
Cyprus	3.664,2	51,30	13,80	6,70	1,20
Macedonia					
Malta **	2.161,8	71,60	8,90	2,70	2,30
Slovenia	254,6	32,20	3,80	5,70	0,80
Turkey	35.707,3	47,20	11,20	3,90	9,00
Yugoslavia F.R. #	12.460,6	65,70	2,90	0,30	6,70
Algeria	9.830,6	59,30	17,30	3,40	1,40
Libyan A.J. **	5.335,0	65,80	1,40	3,20	0,30
Morocco	8.551,5	56,10	8,50	1,50	11,70
Tunisia	7.887,1	71,50	6,00	1,80	5,70

o/o

Country	World millions $	Europ. Union %	USA-Canada %	Japan %	OPEC %
Bahrain *	3.757,5	20,40	11,10	5,60	8,80
Egypt	11.738,9	38,90	19,40	2,70	4,00
Iraq **	368,0	27,10	1,60	0,30	0,10
Israel	28.189,2	51,80	19,40	3,30	0,10
Jordan	3.664,4	33,20	9,70	3,60	18,70
Kuwait	7.761,6	38,00	17,60	9,40	10,70
Lebanon **	4.835,5	46,20	9,20	2,90	3,70
Oman	4.125,4	28,70	7,20	16,30	28,50
Qatar *	1.927,4	33,90	11,10	13,40	14,60
Saudi Arabia *	22.608,3	35,50	23,70	12,10	3,40
Syrian A.R. **	4.300,0	38,80	6,50	8,20	2,00
U.A. Emirates **	25.582,0	32,20	9,50	15,80	8,80
Yemen **	2.155,0	30,50	16,60	5,80	8,50
Djibouti					
Mauritania					
Somalia **	204,3	35,60	18,20	2,50	5,50
Sudan **	1.619,3	42,30	3,80	3,00	17,40

* 1994 ; ** 1993 ; # 1992

Source: Handbook of international trade and development statistics, UNCTAD, 1995

Table 9. Export structure per main region of destination, 1995

Country	World millions $	Europ. Union %	USA-Canada %	Japan %	OPEC %
Mediterranean C.	**828.161,8**	**56,45**	**8,13**	**4,00**	**3,73**
North Med.	**683.710,2**	**62,27**	**6,76**	**1,87**	**3,32**
South Med.	**144.451,6**	**28,91**	**14,62**	**14,09**	**5,70**
Arab Countries	**126.013,3**	**28,41**	**12,14**	**15,14**	**6,59**
France	283.600,4	63,40	6,60	2,00	3,30
Greece	10.160,3	57,00	5,30	1,00	4,00
Italy	231.265,9	56,90	8,20	2,30	3,30
Portugal	23.369,7	80,80	5,10	0,80	0,60
Spain	89.446,8	72,30	4,70	1,40	3,00
Albania					
Bosnia H.					
Croatia	4.632,4	57,70	2,10		1,00
Cyprus	528,6	59,00	1,60	0,30	6,30
Macedonia					
Malta **	1.246,7	77,70	6,10	0,10	6,10
Slovenia	8.314,9	67,00	3,60	0,30	0,90
Turkey	21.596,5	51,30	7,40	0,80	8,10
Yugoslavia F.R. ##	9.548,0	45,80	5,20	0,30	5,20
Algeria	8.555,5	64,80	19,10	0,70	
Libyan A.J. #	10.734,2	86,20			0,10
Morocco	4.728,1	62,10	4,00	7,70	7,40
Tunisia	5.474,6	79,00	1,30	0,30	8,00

o/o

Country	World millions $	Europ. Union %	USA-Canada %	Japan %	OPEC %
Bahrain *	3.452,1	2,40	4,40	5,60	12,60
Egypt	3.444,1	45,80	15,40	1,30	7,70
Iraq #	370,0	6,20	0,80		11,90
Israel	19.047,3	32,30	30,70	6,90	0,20
Jordan	1.431,7	6,30	1,50	1,30	37,90
Kuwait	12.944,3	0,20	0,30	0,10	1,70
Lebanon #	527,0	7,00	3,60	0,20	43,60
Oman	5.911,1	0,80	2,80	28,60	13,80
Qatar *	3.145,2	0,20	1,90	5,80	9,40
Saudi Arabia #	44.352,5	18,50	26,10	18,40	7,40
Syrian A.R. **	3.273,6	58,50	3,50	0,40	8,10
U.A. Emirates #	16.947,7	8,80	4,10	48,80	5,90
Yemen #	112,6	48,00	6,10	14,60	1,50
Djibouti					
Mauritania					
Somalia #	44,0	52,30			43,20
Sudan #	565,0	29,90	2,70	5,10	16,30

* 1994 ; ** 1993 ; # 1992 ; ## 1991

Source: Handbook of international trade and development statistics, UNCTAD, 1995

Table 10. Self-sufficiency coefficients for the main food products 1991-1995 (%)*

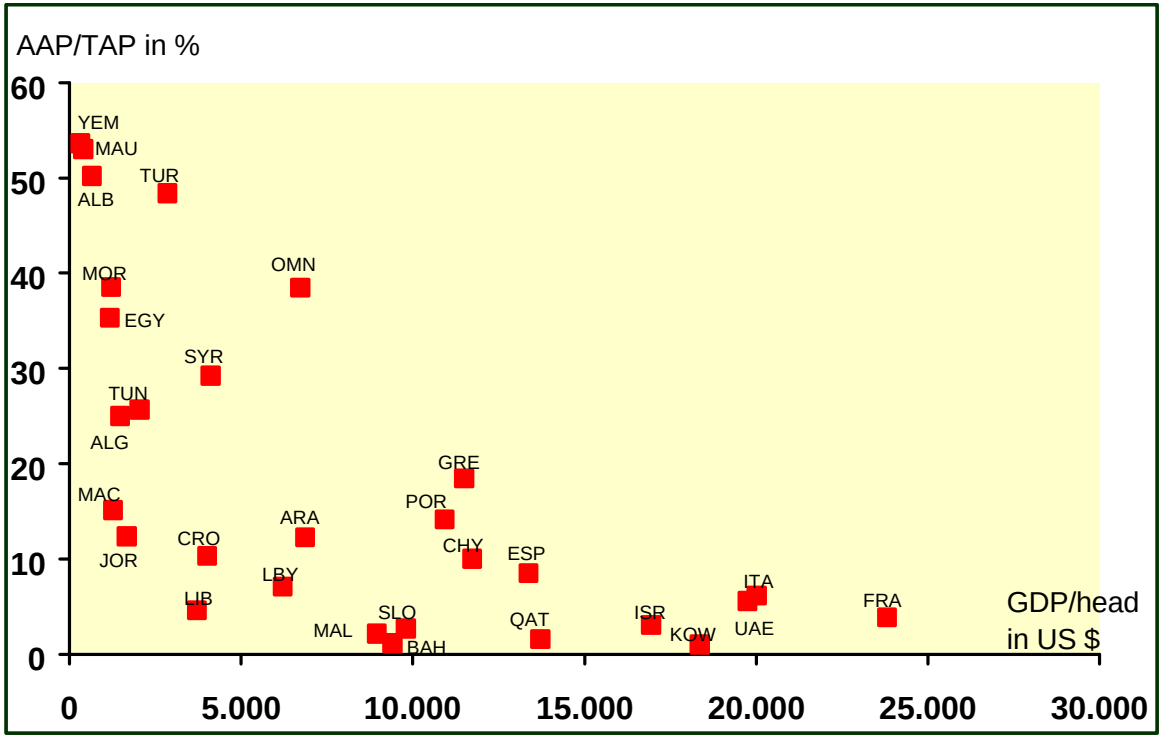
Country	Cereals	Sugar	Milk	Oil	Meat
Mediterranean C.	**92,81**	**81,99**	**91,29**	**84,66**	**95,50**
North Med.	**116,84**	**123,14**	**97,59**	**98,93**	**99,17**
South Med.	**52,59**	**28,17**	**63,06**	**36,79**	**80,88**
Arab Countries	**56,21**	**35,18**	**71,88**	**39,14**	**83,06**
France	206,10	210,61	122,97	102,77	110,05
Greece	109,52	94,42	74,41	140,27	75,08
Italy	81,62	96,39	72,03	89,82	92,78
Portugal	43,83	1,30	99,68	104,01	91,03
Spain	83,63	86,44	87,45	134,88	97,36
Albania	61,99	3,29	90,68	9,76	81,21
Bosnia H.	90,25	54,93	93,86	23,40	87,76
Croatia	107,55	42,09	85,23	71,73	97,59
Cyprus	22,68	0,00	88,22	18,39	93,27
Macedonia	82,13	12,73	81,70	60,98	78,18
Malta	4,76	0,00	38,89	2,55	57,92
Slovenia	50,93	48,02	117,32	1,00	117,21
Turkey	106,32	114,84	99,19	57,93	98,27
Yugoslavia F.R.					
Algeria	28,57	0,00	33,02	9,85	94,88
Libyan A.J.	13,04	0,00	38,47	10,98	96,60
Morocco	65,07	53,93	76,74	42,44	98,40
Tunisia	53,43	9,12	75,44	119,54	93,18

o/o

Country	Cereals	Sugar	Milk	Oil	Meat
Bahrain		0,00	22,98	26,59	37,01
Egypt	66,15	69,68	82,05	14,40	86,75
Iraq	64,44	1,11	81,00	22,48	82,44
Israel	8,56	0,00	97,15	67,59	87,50
Jordan	7,95	0,00	35,16	42,90	72,10
Kuwait	0,40	0,00	9,19	11,61	40,60
Lebanon	10,35	13,42	43,80	19,26	75,17
Oman	1,38	0,00	32,81	2,04	34,41
Qatar	3,39	0,00	26,34	28,10	53,08
Saudi Arabia	52,13	0,00	46,80	1,21	62,12
Syrian A.R.	85,78	20,82	93,47	71,92	98,78
U.A. Emirates	1,30	0,00	14,95	1,02	40,34
Yemen	28,20	0,00	51,84	4,84	84,36
Djibouti	0,03	0,03	36,22	48,71	92,37
Mauritania	38,53	0,00	82,29	5,62	99,69
Somalia	56,08	26,93	99,39	2,82	100,00
Sudan	87,94	115,05	98,86	114,39	100,48

* Self sufficiency coefficient = production (1000 T) / (production - exports + imports) *100 (1000 T)

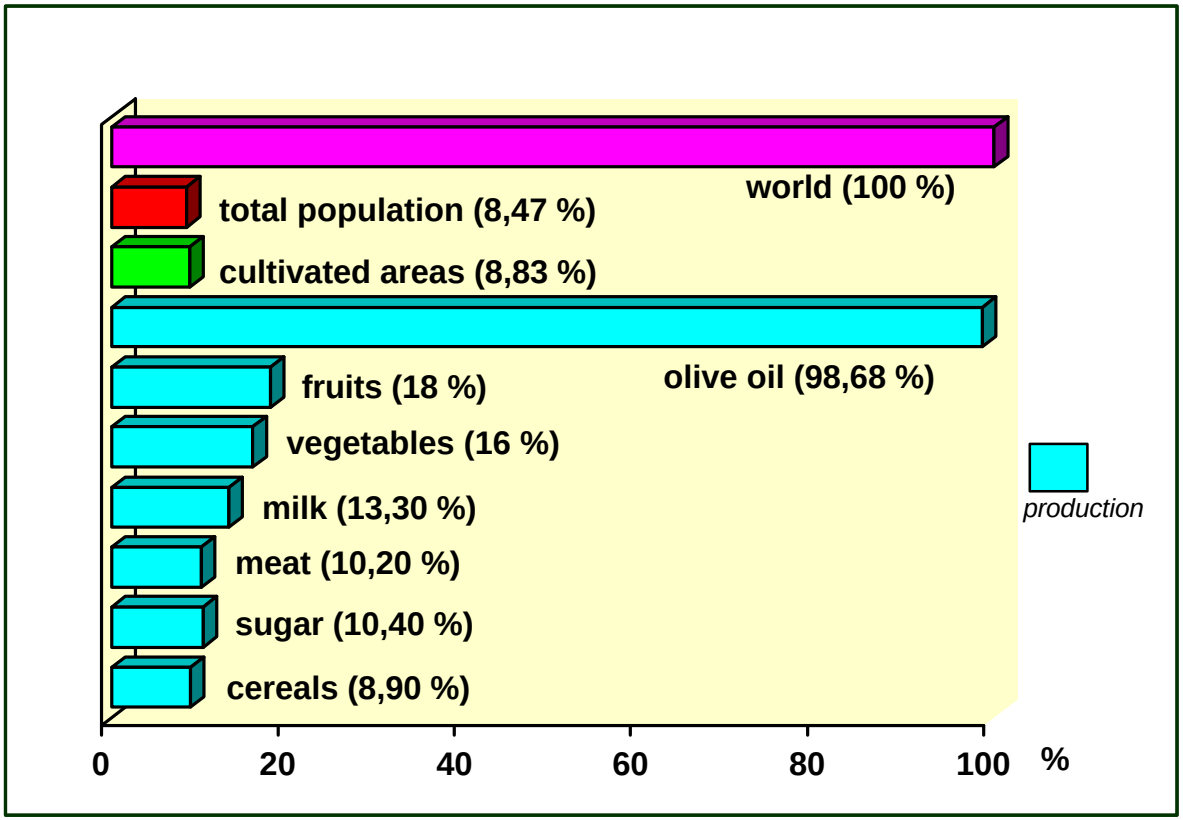
Source: Medagri 1999, based on FAO data



AAP = agricultural active population

TAP = total active population

Graph 1. Importance of agricultural activity as a function of GDP/head



Source: Medagri 1999, based on IMF, World Bank, FAO and national data.

Graph 2. Place of the Mediterranean in the world

Statistical annexes to Chapter II

Table II-13. Food balance: cereals, 1996

	Production	Imports	Produce exchange	Exports	Availability	Self-sufficiency	Standardized balance
	1000 MT	1000 MT	1000 MT	1000 MT	1000 MT	%	%
Albania	523	493	90	0	1106	47.3	-100
Algeria	4902	3850	583	3	9330	52.5	-100
Bosnia-H.	842	188	105	5	1130	74.5	-95
Croatia	2762	96	0	73	2785	99.2	-14
Cyprus	141	593	-4	3	727	19.4	-99
Egypt	14912	7767	360	330	22709	65.7	-92
FR Yugoslavia	7295	101	832	794	7433	98.1	77
France	62560	2214	-3924	29313	31538	198.4	86
FYR Macedonia	538	108	15	24	637	84.5	-64
Greece	4518	1259	-337	605	4835	93.4	-35
Israel	196	3754	-1171	14	2764	7.1	-99
Italy	20437	8713	-1288	4114	23748	86.1	-36
Jordan	99	1465	184	2	1746	5.7	-100
Lebanon	74	854	74	0	1001	7.4	-100
Libya	321	1635	53	0	2009	16.0	-100
Malta	7	175	0	2	180	3.9	-98
Morocco	10089	2907	-3430	32	9534	105.8	-98
Portugal	1613	2630	-452	104	3686	43.8	-92
Slovenia	547	510	0	35	1022	53.5	-87
Spain	22113	6328	-3967	2105	22369	98.9	-50
Syria	5991	483	109	835	5748	104.2	27
Tunisia	2869	1243	-565	73	3475	82.6	-89
Turkey	29251	3367	-400	1277	30941	94.5	-45

Source: FAO

Table II-14. Food balance: wheat, 1996

	Production	Imports	Produce exchange	Exports	Availability	Self-sufficiency	Standardized balance
	1000 MT	1000 MT	1000 MT	1000 MT	1000 MT	%	%
Albania	271	471	60	0	802	33.8	-100
Algeria	2983	3071	350	3	6400	46.6	-100
Bosnia-H.	166	180	105	5	446	37.2	-95
Croatia	741	49	0	35	756	98.0	-17
Cyprus	13	113	-27	3	95	13.7	-95
Egypt	5735	5192	400	6	11321	50.7	-100
FR Yugoslavia	1507	32	832	528	1843	81.8	89
France	35949	1353	-1510	17409	18383	195.6	86
FYR Macedonia	269	65	10	20	325	82.8	-53
Greece	1882	731	-322	530	1761	106.9	-16
Israel	185	1064	-65	10	1174	15.8	-98
Italy	7987	6570	-662	3200	10695	74.7	-34
Jordan	51	290	334	1	674	7.6	-99
Lebanon	45	382	84	0	511	8.8	-100
Libya	168	1167	38	0	1373	12.2	-100
Malta	4	62	0	1	65	6.2	-97
Morocco	5916	2247	-1750	31	6382	92.7	-97
Portugal	8576	2291	-1806	127	8935	96.0	-89
Slovenia	161	95	0	32	224	71.9	-50
Spain	6169	2290	-947	1377	6135	100.6	-25
Syria	4080	55	120	279	3976	102.6	67
Tunisia	2018	864	-585	44	2253	89.6	-90
Turkey	18515	2151	-400	1085	19182	96.5	-33

Source: FAO

Table II-15. Food balance: meat & products, 1996

	Production	Imports	Produce exchange	Exports	Availability	Self-sufficiency	Standardized balance
	1000MT	1000 MT	1000 MT	1000 MT	1000 MT	%	%
Albania	103	14	0	0	116	88.8	-100
Algeria	508	30	0	0	538	94.4	-100
Bosnia-H.	48	35	0	0	83	57.8	-100
Croatia	111	43	0	27	127	87.4	-23
Cyprus	90	4	0	3	91	98.9	-14
Egypt	974	116	30	1	1118	87.1	-98
FR Yugoslavia	1038	24	0	16	1046	99.2	-20
France	6524	1087	0	1839	5772	113.0	26
FYR Macedonia	48	47	0	2	94	51.1	-92
Greece	509	358	0	17	851	59.8	-91
Israel	282	85	0	9	359	78.6	-81
Italy	4098	1157	0	319	4935	83.0	-57
Jordan	112	20	0	1	131	85.5	-90
Lebanon	85	18	14	0	117	72.6	-100
Libya	123	5	4	0	132	93.2	-100
Malta	18	16	0	0	33	54.5	-100
Morocco	428	10	0	7	431	99.3	-18
Portugal	672	133	0	20	785	85.6	-74
Slovenia	178	31	0	33	176	101.1	3
Spain	4133	286	-77	393	3949	104.7	16
Syria	276	6	-5	0	278	99.3	-100
Tunisia	179	3	0	1	181	98.9	-50
Turkey	1197	19	0	10	1206	99.3	-31

Source: FAO

Tableau II-16. Food balance: milk & products, 1996

	Production	Imports	Produce exchange	Exports	Availability	Self-sufficiency	Standardized balance
	1000 MT	1000 MT	1000MT	1000 MT	1000 MT	%	%
Albania	1044	20	0	0	1064	98.1	-100
Algeria	907	1817	0	5	2719	33.4	-99
Bosnia-H.	295	56	0	0	352	83.8	-100
Croatia	599	212	0	57	755	79.3	-58
Cyprus	180	32	6	24	194	92.8	-14
Egypt	2744	273	0	3	3013	91.1	-98
FR Yugoslavia	2048	45	0	9	2084	98.3	-67
France	25732	2771	77	8511	20069	128.2	51
FYR Macedonia	192	27	0	0	219	87.7	-100
Greece	1882	925	0	66	2741	68.7	-87
Israel	1155	109	-61	17	1185	97.5	-73
Italy	11777	6595	96	1217	17251	68.3	-69
Jordan	153	30	0	3	179	85.5	-82
Lebanon	187	228	29	1	444	42.1	-99
Libya	131	282	13	0	427	30.7	-100
Malta	45	53	0	0.5	98	45.9	-98
Morocco	915	135	0	15	1035	88.4	-80
Portugal	1738	256	0	227	1767	98.4	-6
Slovenia	593	22	0	85	530	111.9	59
Spain	6600	1736	75	463	7948	83.0	-58
Syria	1508	64	-11	6	1555	97.0	-83
Tunisia	632	73	0	2	703	89.9	-95
Turkey	10760	95	0	20	10835	99.3	-65

Source: FAO

Table II-17. Food balance: vegetables & products, 1996

	Production	Imports	Produce exchange	Exports	Availability	Self-sufficiency	Standardized balance
	1000 MT	1000 MT	1000 MT	1000 MT	1000MT	%	%
Albania	430	5	0	0	435	98.9	-100
Algeria	1982	33	0	2	2013	98.5	-89
Bosnia-H.	563	7	0	0	570	98.8	-100
Chypre	103	6	0	14	94	109.6	40
Cyprus	316	106	0	19	403	78.4	-70
Egypt	10043	2	-68	218	9760	102.9	98
Spain	9582	312	0	3189	6705	142.9	82
FR Yugoslavia	1047	55	0	29	1073	97.6	-31
France	7752	2090	8	1379	8472	91.5	-20
FYR Macedonia	371	10	0	75	306	121.2	76
Greece	3464	103	0	534	3033	114.2	68
Israel	1298	40	0	163	1176	110.4	61
Italy	14124	829	-400	3421	11133	126.9	61
Jordan	1053	10	0	149	914	115.2	87
Lebanon	864	130	0	58	936	92.3	-38
Libya	417	171	19	25	582	71.6	-74
Malta	72	7	0	0	79	91.1	-100
Morocco	2558	9	0	204	2363	108.3	92
Portugal	2088	136	0	416	1809	115.4	51
Slovenia	108	76	0	6	178	60.7	-85
Syria	1526	0	0	140	1386	110.1	100
Tunisia	1476	6	0	43	1439	102.6	76
Turkey	16363	11	0	1174	15201	107.6	98

Source: FAO

Table II-18. Food balance: fruits & products, 1996

	Production	Imports	Produce exchange	Exports	Availability	Self-sufficiency	Standardized balance
	1000 MT	1000MT	1000 MT	1000 MT	1000 MT	%	%
Albania	128	43	0	3	169	75.7	-87
Algeria	1729	64	0	12	1781	97.1	-68
Bosnia-H.	90	35	0	1	125	72.0	-94
Croatia	612	243	0	38	818	74.8	-73
Cyprus	337	22	0	145	214	157.5	74
Egypt	7690	63	-45	106	7602	101.2	25
FR Yugoslavia	2103	202	0	174	2131	98.7	-7
France	12120	4931	-10	2073	14968	81.0	-41
FYR Macedonia	463	65	0	81	447	103.6	11
Greece	4957	227	150	2044	3290	150.7	80
Israel	1995	123	-21	993	1103	180.9	78
Italy	19318	1762	-100	3971	17010	113.6	39
Jordan	452	83	0	59	476	95.0	-17
Lebanon	1355	86	0	131	1310	103.4	21
Libya	447	41	0	2	487	91.8	-91
Malta	18	35	0	6	47	38.3	-71
Morocco	3215	29	0	699	2544	126.4	92
Portugal	2095	498	0	73	2520	83.1	-74
Slovenia	304	146	0	46	404	75.2	-52
Spain	14493	922	152	5279	10288	140.9	70
Syria	2116	65	-24	139	2016	105.0	36
Tunisia	1166	24	0	42	1148	101.6	27
Turkey	15732	193	6	1948	13984	112.5	82

Source: FAO

Table II-19. Food balance: oil crops, 1996

	Production	Imports	Produce exchange	Exports	Availability	Self-sufficiency	Standardized balance
	1000MT	1000 MT	1000 MT	1000 MT	1000 MT	%	%
Albania	47	0	0	0	47	100.0	0
Algeria	416	33	0	0	449	92.7	-100
Bosnia-H.	7	0	0	0	7	100.0	0
Croatia	92	23	0	7	108	85.2	-53
Cyprus	11	58	0	0	68	16.2	-100
Egypt	1025	261	-38	23	1224	83.7	-84
FR Yugoslavia	565	103	0	8	660	85.6	-86
France	5220	1277	150	2496	4151	125.8	32
FYR Macedonia	25	8	0	1	31	80.6	-78
Greece	2533	395	133	174	2886	87.8	-39
Israel	171	501	-25	207	440	38.9	-42
Italy	3737	1301	-83	207	4918	76.0	-73
Jordan	129	22	0	0	151	85.4	-100
Lebanon	78	33	2	2	110	70.9	-89
Libya	64	20	0	4	80	80.0	-67
Malta	0	7	0	0	7	0.0	-100
Morocco	1039	202	0	57	1185	87.7	-56
Portugal	342	994	-27	14	1295	26.4	-97
Slovenia	2	7	0	1	8	25.0	-75
Spain	5887	3086	-21	257	8695	67.7	-85
Syria	1186	31	2	67	1152	103.0	37
Tunisia	1261	12	0	1	1273	99.1	-85
Turkey	3942	838	10	43	4746	83.1	-90

Source: FAO

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