

# DOCUMENT

**DEVELOPMENT STRATEGY FOR THE  
AGRO-FOOD INDUSTRIES IN THE  
MEDITERRANEAN REGIONS OF THE  
EUROPEAN COMMUNITY**



**COMMISSION  
OF THE EUROPEAN COMMUNITIES**

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Commission of the European Communities

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This study examines the structure of the agro-food industries in three Mediterranean regions of the Community. It draws upon country studies for Greece, Southern Italy, and Mediterranean France.

Agriculture in these three regions consists largely of small farms, often fragmented, operated on hilly or mountainous terrain. The production of wine, olive oil, fruits and vegetables, for both fresh and processing markets. The regions are deficit in the production of cereals, meat animals, and milk products.

The markets for the traditional Mediterranean products are local, national, and, to varying degrees, international. Many of the processing and marketing facilities were set up to serve local needs and markets, and find themselves not well equipped to serve national or international markets. The markets for milk and meat products are local, whereas some cereal processors are geared to serve national and international markets.

A high proportion of the firms which handle certain products are cooperatives. Apart from cereals cooperatives, they tend to be small, perform limited functions, and are not well equipped to compete in national and international markets. Employment in the processing industries is highly seasonal, and substantial excess capacity exists in many areas and products.

Many of the processing firms have old facilities and lack modern machinery and technology. These features inhibit the ability of the firms to produce high quality products. Firms which were organized to produce for and sell in national and international markets tend to be larger, more modern, and have more efficient and effective organization. They are found in tomato processing, fruit canning, and cereal processing.

The major purchasers of many of the products shipped outside the region are supermarket chains in the northern portions of the Community. There is little or no vertical integration in the agro-food industries in these three regions outside the cereal processing firms.

The dominance of cooperatives, the small size, and limited product nature makes the cost of the functions now performed high and virtually prohibits the performance of many other functions which would bring value added to the firms and the regions. The structure of agricultural production in the region places constraints on the location and size of processing facilities. Thus, new forms of organization and ventures need to be considered to bring efficiency to some functions.

Community policies relating to aids to investment have become a dominant factor in investment decisions in some product lines. Many firms believe that the investment policies work at cross purposes and there is a strong feeling by private firms that they are discriminated against by current policies.

Given the importance of small cooperatives and private firms, the Community policies should give greater emphasis to supporting services necessary to enable these types of firms to operate efficiently and effectively in the markets which they face.

The Commission should consider action which would improve the underlying services available to these agro-food industries in the area of research, market information, formal and informal training, marketing, and capital development. All of these should be taken in the context of achieving rationalization of the industry.

Special attention needs to be given as to the scope of the markets served by different firms and handling different products. This can and should influence the type and amount of assistance which is most needed.

This study is published in English, French and Italian

## FOREWORD

This study has been undertaken in the framework of the study programme of the Directorate General for Agriculture of the Commission of the European Communities.

The present report concerning the development strategie for the agro-food industries in the mediterranean regions of the European Community, covers Italy, Greece and the relevant areas of France and was prepared by

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with the collaboration of research workers in four national institutes :

- Agricultural Bank of Greece (Greece)
- Tecnagro (Italy)
- Centre for European Agricultural Studies of "Wye College"  
(France)
- Institut de Gestion International Agro-Alimentaire (France).

The Division "Reports, Studies, Statistical Information, Documentation" and the Directorate "Agricultural Structures and Forestry" of the Directorate General for Agriculture of the Commission of the European Communities participated in the work.

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The present study does not necessarily reflect the views of the Commission of the European Communities in this area and in no way anticipates the Commission's future attitude towards this matter.





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## I. INTRODUCTION

This report focuses on the agro-food industries in the Mediterranean Regions of the European Communities. It is intended to provide some of the framework for a development strategy for the agro-food industry in the Mediterranean Regions of the Communities.

These regions (to be defined later) can be generally classed as disadvantaged regions in terms of levels of income, unemployment and underemployment, and other measures commonly used to measure economic and social well-being.

The production of agricultural products still plays a large role in providing employment and income in the regions under consideration. Because of this fact, any discussion of regional development strategy must pay attention to the role of the agro-food industry in the region and its potential to contribute both to increased farm income and to a regional development strategy.

Traditionally regional development strategies have focused largely upon ways to attract new industries and new sources of employment to less advantaged regions. While this is proper, quite often little or no attention is given to the question of what can be done to make existing industries more efficient, more prosperous, more able to compete, and thus, a source of growth of local employment as well as improving the basic sector with which they are associated. This study starts from a different perspective. It assumes that agriculture will continue to provide a significant portion of the employment and income in the regions under discussion. Therefore, the question addressed was : "What might be done to make the agro-food industries which are associated with the agricultural industry more efficient and effective?"

Thus, while the specific link being investigated is the agro-food industries, they are examined in terms of their location within specific regions of the European Communities and in relationship to agricultural products produced in those regions. In this sense these industries are taken in a regional and industry context. In another sense, however, the analysis is limited because, as we shall see, part of the market for the products being examined are outside the region; and, no attempt has been made in this study to examine the actions of firms or the structure of markets located outside the region, even though in many cases they have a significant effect upon what happens in the region.

This particular emphasis and definition of the study was the result of both the emphasis suggested by the Commission of the European Communities in its suggestions for the study and the necessary constraint placed upon the study effort by the limited budget and time available to address the problem.

The regions covered by the study include all of Greece, the area of Italy referred to as the Mezzogiorno, and two regions of France (Languedoc-Roussillon and Provence-Alpes-Cote d'Azur). (See Figure 1.) Thus, the study includes all of Greece, all of Italy roughly south of Rome, and a coastal region of France extending from the Spanish to Italian borders.

The study concentrates upon the industries related to the transformation and marketing of food crops. Even though in the geographical region there is significant production of non-food crops such as forest products, flowers, cotton, and tobacco which are important to the income of agricultural producers in the region, these crops are not included in this study. It was felt that some limit had to be placed upon the study in view of the resources available and that concentrating on food products was a limit which was reasonable. A decision also was made to exclude several food crops from the study. One which was omitted was sugar beets, which are produced and processed in the region, but which are not a dominant crop.

A second omission is that of foodstuffs which have no production base in the regions under discussion. For instance, in Mediterranean France there are processors of foods which depend entirely upon imported raw materials, such as processors of coffee and chocolate. They are omitted from this study because they are not significantly related to any local agricultural production in the regions under study. However, their omission does not reflect an adverse view as to their importance as a source of income and employment to the region.

Even with these limits, the number of products covered and the national and geographical differences involved strain the ability to generalize regarding either the problems involved or their possible resolution. What follows is a general report which drew upon four separate and parallel studies which investigated the three individual regions. (There were four regional studies because it was necessary to have two studies on Mediterranean France to cover adequately the products involved.)

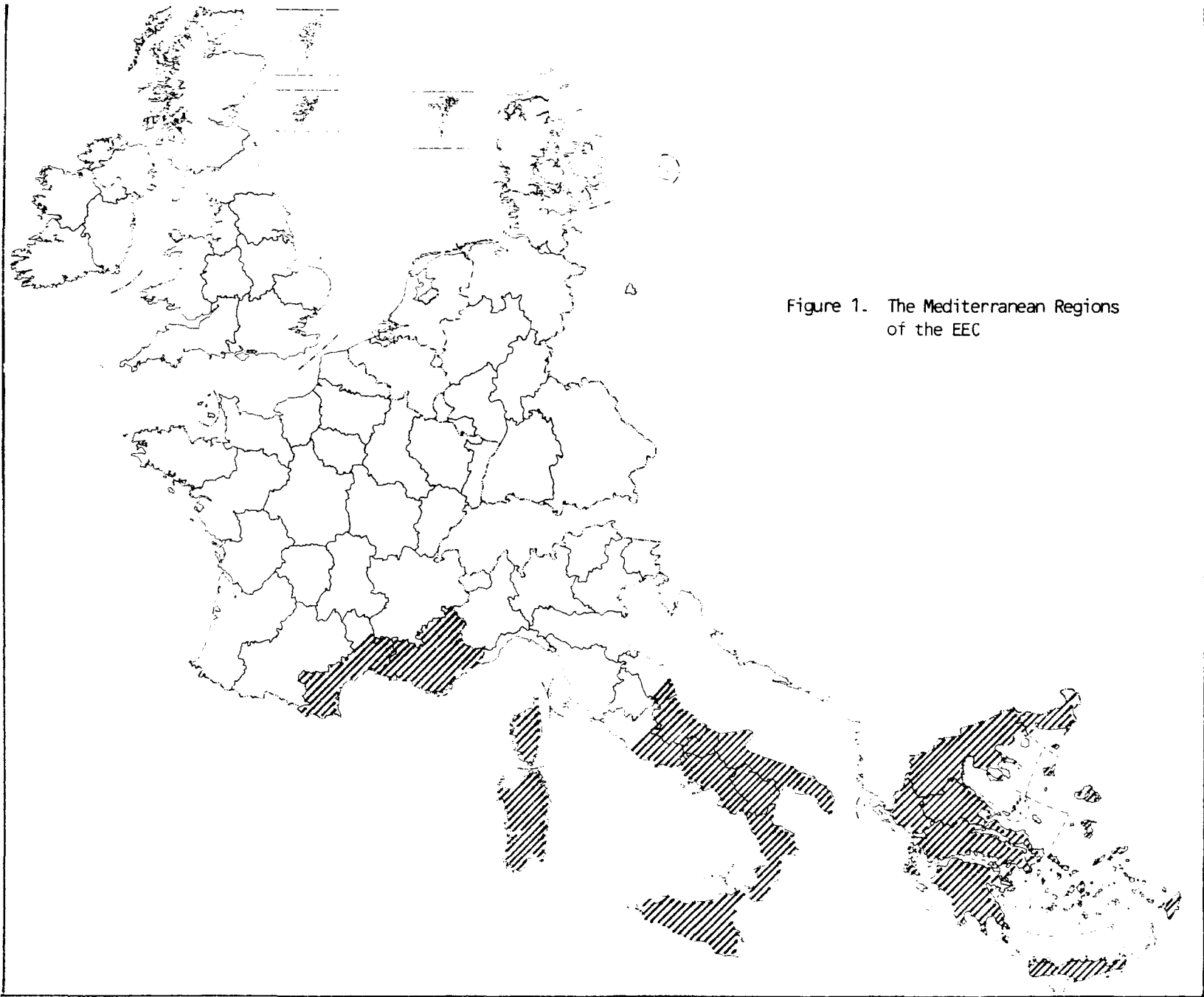


Figure 1. The Mediterranean Regions  
of the EEC

## II. THE ORGANIZATION OF THE STUDY

The organization of the study was unique. First, it was decided that a general overall study coordinator was needed to provide the framework for the work and to produce, insofar as possible, a single report which encompassed problems involving three countries. Dr Dale Hathaway, of The Consultants International Group, Inc., was selected for this role. The coordinator, in consultation with the staff of the Commission, then arranged for capable national institutions to undertake studies regarding the agro-food industries in their respective countries.

The overall approach to the problem and the issues addressed in the study are the joint product of the commission staff, the study coordinator, and the study leaders from the four institutions involved. A series of meetings and discussions evolved a mutual understanding of the approaches to be taken and the issues to be examined.

It was recognized at the outset of the study that, given the very severe time limits for the work and the budget constraints, the research approach used would have to be different than that often used. It was agreed that in this study of the agro-food industries less extensive and less formal methods would be used to attempt to get a picture of the situation as it now stands, with heavy emphasis upon the view of the problem as seen from the regions by persons directly involved in or related to the industry. This approach was an important factor in the selection of the cooperating institutions and individuals and in the approach agreed upon by the study leaders.

In Greece, the Agricultural Bank of Greece was the collaborating institution which made available some of its most knowledgeable and experienced personnel. Inasmuch as the Bank is directly and continually involved in both the financing and technical assistance to various sectors of the agro-food industry in Greece, there is no other institution which could bring similar background to the work in that country.

In Italy, the collaborating institution was Tecnagro, a private non-profit research organization. This organization, sponsored by several agricultural and industrial organizations in Italy, could draw upon these organizations and the universities for data and information regarding the agro-food industries in the South of Italy.

In France the effort was shared by two organizations. The study of the situation in fruits and vegetables and wine was carried out by the Centre for European Agricultural Studies of Wye College, drawing largely upon their personnel located at Montpellier which is the centre for research on Mediterranean agriculture in France and has a number of knowledgeable individuals who were available to the study team. The work on grains,

oilseeds, and livestock was done by the Istitute de Gestion Internationale Agro-Alimentaire of Cergy-Pontoise, France. This institution has had an ongoing program of research on agro-food matters in France and has broad contacts with individuals in the industry throughout France.

This report draws upon the country and product studies from the study teams, but it neither depends entirely upon them nor entirely accepts all of the points which appear in the individual country reports. In any event none of those individuals who worked on country reports is responsible for any opinions expressed in this report.

The report which follows, thus, draws upon an extensive base of information developed by study teams in the regions, using both secondary information and direct interviews with managers of firms in the region. The very detailed information developed by those country studies is drawn together and generalized. The individual reports underlying this report can be obtained from the individual research groups, which in some cases may publish all or parts of their work as separate reports.

III. AGRICULTURE IN THE MEDITERRANEAN REGION  
OF THE EUROPEAN COMMUNITY

Since the study focuses upon that portion of the agro-food industries in the region which dealt with products of the region, it is necessary to start with a discussion of the agricultural base which underlies most of the agro-food industries.

The careful observer of the agriculture in the three regions studied is likely to be impressed, and rightfully so, by the unique characteristics of the individual regions which arise from their own vastly different histories, cultures, languages, social structures and other factors which make each region different. It was exactly these differences which made individual country studies imperative and valuable. One important difference is that each of the three regions is a part of a different sovereign state and, thus, subject to a multitude of economic and political forces coming from national, regional, and local governments, as well as those coming from the European Community.

There also is great diversity between the three regions and even within each of them as to the products produced. Even though the products carry the same name, i.e., wine, the product which carries that name is different from one region to another and even from one farm to another in the same region. These regions produce many such products which are at the same time unique and competitive in the consumer market. They also produce many products which are relatively homogenous, such as durum wheat, meats, poultry, and many fruits and vegetables.

While each of the regions is unique, it is their common characteristics and the need to find a solution to their common problems that will be the focus of our attention. These common characteristics are more than may be apparent to the casual observer, and they are important in defining some of the limits experienced and problems faced by the agricultural producers and agro-food industries in the regions.

One of the common characteristics is climate and topography. The common features of the climate both limit and extend the agricultural possibilities. Their warm climate allows the production of agricultural products of a different type (olives, citrus) than can be grown in colder climates. The warmer climate also allows for production of certain products over a longer season than would be the case elsewhere. The distribution and level of rainfall, however, limits the ability to produce certain products without irrigation and the topography limits the use of irrigation in most of the regions.



Another common feature shared by the three regions is topography. In all three a significant proportion of the land area is hilly or mountainous, which together with the climate, limits the kinds of agricultural production which can be undertaken and severely limits the use of mechanical technology in the production of crops. For instance in the Mezzogiorno 82 percent of the land is mountainous or hilly, in Greece 45 percent of the cultivated land is mountainous or semi-mountainous, in Mediterranean France about 60 percent "hilly".

These physical limitations have caused these regions to concentrate on the production of certain crops with common characteristics. These regions have a heavy concentration on the production of tree crops (olives, fruit, citrus), vines, and vegetables which are adapted to the climate and terrain. For instance, 70 percent of the value of agricultural output in Mediterranean France in 1980 came from wine, fruits and vegetables. In the Mezzogiorno over 60 percent of farm output consists of fruits, vegetables, wine products and olives. In Greece, these products account for nearly half of farm output. Whereas these same products could and are being grown under different conditions elsewhere, in these regions there are very real technical and economic limitations to producing alternative products and, thus, farms have limited ability to adjust agricultural resource use.

Another significant feature of these tree and vine crops is their long time horizon in terms of investment. Once land is committed to the cultivation of tree and vine crops, it will stay in the production of these crops for a long period before a new investment decision is required. Since there is some period between the time when an investment decision is made and the time when the investment produces income, there is little immediate response to market prices. Even if producers in these regions had reasonable alternatives for the use of their land, the long-term characteristics of the investments in trees and vines make adjustment to market changes slow and difficult. Moreover, in the case of trees and vines not only is land use relatively fixed but in addition the specific varieties also are fixed, limiting flexibility to respond to market changes.

Another group of products of importance to the Mediterranean regions of the Communities is the production of vegetables for both fresh market consumption and processing. For these products the production characteristics are different. Since they are planted and harvested frequently (at least annually), production adjustments are quicker and the range of products which can be produced is wider.

There are two features of these products (trees, vines and vegetables) which are shared. One is that they are relatively labor intensive as they are produced in the Mediterranean regions of the Communities.

Moreover, for reasons which will be discussed later, they are likely to remain so for the foreseeable future. Not only are the crops labor intensive, but in addition the labor requirements are highly seasonal so that local labor

availability may be a limiting factor during some periods even though the workers in agriculture in these regions may be considered on the average over the year as under-employed. As the producers of these products found their markets shifting from local to national and international markets, they also find themselves competing with producers in other countries, some of which are low-wage countries, and some of which have production conditions which allow mechanization of production and, thus, also results in lower production cost.

Another common characteristic shared by the producers of many of these Mediterranean products is their perishability in the form in which they are produced on the farm. All of them have a limited storability in their raw form and many require processing of some type before consumption (wine, olive oil). For many of the products (fruits, vegetables) some form of processing is the only way of dealing with the perishability of the products. When the products are marketed in fresh form over significant distances, the organization of the marketing chain and its technical and economic efficiency becomes an important factor determining the markets which can be reached.

This need for specialized handling and processing highlights the reason that this study concentrates on the functions relating to these processing and marketing activities. Unlike some other products, say grains, the farm producer has little option but to deliver his perishable products to the marketing chain immediately and his choice of points of delivery are likely to be more limited.

Another characteristic shared by these producing regions is that they are located a substantial distance from at least a significant part of the market for their products. As the French study shows, this is less so for producers in Mediterranean France because of the large transient population of tourists which provide a local market for many of the products produced in the region. Even so, for a significant portion of the French products, and even more of the Italian and Greek products, the markets for much of the production are outside the country. Moreover, for many of the products involved the access to the consumer market is through large-scale organizations of wholesalers and supermarket chains located in Northern Europe and which have great buying power and great efficiencies at the retail level because of their size.

There is another interesting similarity among the three Mediterranean regions studies. They are all deficit producers of total grains, oilseeds and most animal products. Greece and the Mezzogiorno however, are surplus producers of durum wheat. The fact that they are deficit in the production of most grain and oilseeds is not surprising, given the topography and structure of farms. The reasons for the deficit in livestock production are varied and complex. They include tradition, high costs of forage and animal feedstuffs, inadequate supporting infrastructure for both production and processing, and lagging technology at both the farm and processing level.

Another common characteristic shared by the three regions included in the study is that the farms in them are generally smaller than the average for the Communities, and in many cases the holdings are scattered. (See Table 1) In Greece 79 percent of the farms are less than 5 hectares, in Mediterranean France 55 percent, are under this size and in the Mezzogiorno 76 percent. Only 6 percent of the farms in Greece are over 10 hectares, whereas 30 percent in Mediterranean France, and 11 percent in the Mezzogiorno are over this size. The small size adds to the problem of mechanization, limits the efficient use of labor, results in higher costs of production, and contributes to problems of organizing an efficient processing and marketing system. In addition, the small land area increases the pressure to produce products which are labor intensive and thus employ family labor more fully.

TABLE 1. Size Distribution of Farms, Mediterranean Regions

SIZE (ha)	FRANCE % OF TOTAL	GREECE % OF TOTAL	ITALY % OF TOTAL
<u>.1 - 4.9</u>	55	79	76
0 - .9	23		21
.1 - 2.9		61	
1 - 1.9	14		25
2 - 2.9			14
2 - 4.9	18		
3 - 4.9		18	15
5 - 9.9	14	15	13
<u>10 +</u>	30	6	11
10 - 14.9	9		
10 - 19.9		4	6
15 - 24.9	9		
<u>20 +</u>		2	5
20 - 29.9			2
25 - 49.9	7		
30 - 49.9			1
50 -100	3		1
<u>100 +</u>	<u>2</u>	—	—
TOTALS (*)	99	100	100

(\*) May not equal 100% because of rounding.

IV. AN OVERVIEW OF THE MARKET FOR  
MEDITERRANEAN PRODUCTS

There are two aspects of the markets for Mediterranean products. One aspect is where are these products sold or how important are certain markets for the different products. A second aspect of markets is related to aggregate consumption trends for the specific products and what this implies for the producers and associated agro-industries.

This study was not designed to provide new and original research on these topics. It is necessary, however, to review the issue of markets because the functioning of agro-food industries in the regions in large part are judged by how these agro-food industries relate local producers to markets.

For all of the products which the three regions produce in surplus, a system of multiple markets exists. One of the markets is the local market, which means the region in which the raw product is produced. The local market, as defined here, consists of self-consumption by agricultural producers and products sold to people who live in or visit the region. The importance of the local market varies from region to region, from product to product, and from season to season in the year. For instance, in Mediterranean France the local market for fresh fruits and vegetables is an important factor and is especially so during the summer tourist season. On the other hand, for most processed fruits and vegetables the local markets are generally not very significant, in part because they face substantial competition from local fresh products. Thus, for a product such as canned tomatoes or tomato paste local markets are, at best, a modest fraction of the consumption of the product. Thus, markets outside the region, either national or international, are the most significant markets for many of the products produced in the three Mediterranean regions.

There is a third category of market which differs from the two discussed above. It is the market for such products as grains and meat animals where the Mediterranean regions are deficit producers and some of the local consumption is imported from other regions and/or from other countries. As we shall discuss later, these markets appear to be organized differently and the price determination in these markets is probably quite different than for the other two types of markets.

It is likely that a failure to recognize these different markets and their different structure and functions has led to much confusion in both public and private investment strategy in dealing with the problems relating to the agro-food industries in the Mediterranean region of the European Communities. As we shall discuss later, many firms operating in the regions were developed to serve local markets and are not well organized to operate efficiently in national, let alone international markets.

Unfortunately, statistics do not exist which provide accurate data about the relative importance of these various markets to the specific regions involved. However, some new and useful information is available from the country studies in this report and this information provides useful insights into both problems and directions which might be followed.

International trade is a significant factor in the markets for many of the products of great significance to the three Mediterranean regions under discussion and especially for those products for which the regions are surplus producers. For instance, 54 percent of all of Greece's agricultural exports were of fruits and vegetables in 1977-1979 and these products constituted 71 percent of all exports to other countries of the Communities in those same years (1). (See Tables 2 and 3.) For Italy, fruits and vegetables constituted 45 percent of its agricultural exports to the world and 53 percent to the Communities in those same years. Italy's exports of beverages (mostly wine) amounted to another 18 percent of total agricultural exports and about the same amount to other countries in the Communities. On the other hand, olive oil only accounted for about one percent of agricultural exports from Italy. For France as a whole (no regional statistics are available) beverages (wine) made up about 18 percent of agricultural exports in 1977-1979 and were by far the largest of the Mediterranean products in terms of exports. However, most French wine exports come from regions of France outside the Mediterranean region. Fresh and frozen vegetables were a far distant second among these products and accounted for only 2.5 percent of French agricultural exports in 1977-1979.

For products which enter international markets from the three Mediterranean regions, the other member countries of the European Communities are an important market.

For instance, 54 percent of all French beverage exports went to other member countries in the Communities in 1977-1979. Another significant market was the United States, which took 14 percent of the French exports. The EC was even more important as a market for French fruits and vegetables, for 80 percent of French exports of those products went to other Member States. For items such as fresh stone fruit (91 percent) and fresh apples (87 percent) the markets in other member countries were by far the dominant export market for products from Mediterranean France.

Italy is even more dependent upon other Community members as export markets for some products. In the case of beverages (wine) no less than 63 percent of all exports in 1977-1979 went to other member states and 20 percent to the United States. For all fruits and vegetables as a group 76 percent of Italian exports in 1977-1979 went to other member states. This market was especially important for preserved fruits (68 percent), fresh apples (81 percent), and stone fruit (82 percent). It is interesting to note that only 41 percent of Italian olive oil exports went to other member states and a substantial 27 percent went to the United States.

(1) Selected Agricultural Trade Statistics for the European Communities, Greece, Spain and Portugal, 1976-79, United States Department of Agriculture Statistical Bulletin 692, October 1982.

TABLE 2. Exports of Selected Agricultural Commodities - Relative Shares  
of Total Agricultural Exports 1977-79

PRODUCT	FRANCE % OF TOTAL	GREECE % OF TOTAL	ITALY % OF TOTAL
BEVERAGES	17.86	3.94	18.01
FRUITS AND VEGETABLES	8.38	54.14	44.69
ORANGES AND TANGERINES	.11	4.30	1.14
LEMONS AND GRAPEFRUIT	.02	1.70	1.77
FRESH APPLES	1.93	.34	3.84
FRESH STONE FRUIT	.26	6.45	5.52
RAISINS	.01	12.69	.01
FRUITS, PRESERVED	.72	9.63	5.82
VEGETABLES - FRESH AND FROZEN	2.51	4.78	8.29
OLIVE OIL	.06	2.91	.98

TABLE 3. Exports of Selected Agricultural Products by Destination, 1977-79

: PRODUCT :	: Form :			: GREECE :			: ITALY :		
	: EC :	: U.S. :	: OTHER :	: EC :	: U.S. :	: OTHER :	: EC :	: U.S. :	: OTHER :
	: % OF TOTAL :			: % OF TOTAL :			: % OF TOTAL :		
: BEVERAGES :	: 53.96 :	: 13.77 :	: 31.53 :	: 55.25 :	: 7.74 :	: 32.75 :	: 62.56 :	: 19.81 :	: 17.45 :
: FRUITS AND VEG. :	: 80.18 :	: .73 :	: 18.12 :	: 57.29 :	: 1.97 :	: 40.65 :	: 76.02 :	: .73 :	: 22.85 :
: ORANGES & TANGER. :	: 88.67 :	: .01 :	: 11.31 :	: 17.67 :	: 0 :	: 82.33 :	: 48.03 :	: 0 :	: 51.96 :
: LEMONS & GRAPEFR. :	: 79.35 :	: .10 :	: 20.57 :	: 9.82 :	: 0 :	: 90.18 :	: 36.87 :	: .10 :	: 62.99 :
: FRESH APPLS :	: 86.87 :	: .15 :	: 12.97 :	: 62.32 :	: 0 :	: 37.69 :	: 81.62 :	: .04 :	: 18.34 :
: FRESH STONE FRUIT :	: 90.94 :	: .01 :	: 9.03 :	: 87.85 :	: 0 :	: 12.15 :	: 82.14 :	: 0 :	: 17.86 :
: RAISINS :	: 16.20 :	: .01 :	: 83.81 :	: 56.51 :	: 1.33 :	: 41.90 :	: 41.18 :	: 0 :	: 58.82 :
: FRUITS, PRESERVED :	: 72.56 :	: 4.77 :	: 22.53 :	: 64.50 :	: .14 :	: 35.26 :	: 88.18 :	: .74 :	: 10.68 :
: VEG. FRESH & FROZ. :	: 74.42 :	: .29 :	: 23.49 :	: 92.32 :	: .07 :	: 7.62 :	: 78.57 :	: .19 :	: 21.16 :
: OLIVE OIL :	: 73.36 :	: 3.00 :	: 23.64 :	: 82.70 :	: 2.24 :	: 15.06 :	: 40.87 :	: 27.15 :	: 31.74 :



It is harder to judge the situation insofar as Greece is concerned because the available statistics do not yet include years after entry to the Communities. Moreover, one would expect that some time would be required after entry before business and trade ties completely in harmony with the new situation are reached.

Even so, the other members of the EC are very important export markets for Greek agricultural products in 1977-1979. For instance, other members took 55 percent of Greek beverage exports, 87 percent of the fresh stone fruit exports, 64 percent of preserved fruit exports, and 83 percent of Greece's olive oil exports. Thus, in varying degrees for different products the major export markets for most of the Mediterranean products which the three regions produce in excess of local and national needs is to other member nations within the Communities. Given the intense competition in many of the outside markets the internal market is likely to remain the major market.

Even though other member countries of the EC are the major market for most of the exports of Mediterranean products, the EC as a whole is not self-sufficient for many of these products, especially fruits and vegetables. When this is the case, as it is here, there is a natural tendency to look at the possibility of import controls as a method of improving the market for producers in the member states. Such measures are already in effect for many products, especially in the form of differential duties which provide protection during the season when production is available from member states. Thus, much of the imports of items such as fresh fruits and vegetables are in fact off-season imports when Community production falls short of seasonal demand.

This means that the Mediterranean regions of the Communities are primarily competing with each other for the markets in the member states and with each other and with outside producers for markets in the rest of the world. The competition for internal (member state) markets will intensify when Spain and Portugal become members because they grow similar products during much of the same season. At the same time, there is no reason to believe that the competition for markets outside the Communities will lessen for most of these products.

Given the importance of member state markets, it is useful to judge how they will develop in the future. The Commission has done some projections in this regard and the World Bank has done some for fresh fruits and vegetables (1).

There currently is a substantial excess of production over consumption of wine in the ten member states, and the total consumption of wines is expected to decline in the Communities in the years ahead. This decline is already evident and is especially so in the ordinary wines which as we shall see, produces a special problem for the Mediterranean regions of the Communities.

- (1) See Guidelines for European Agriculture (Communication from the Commission to the Council), Brussels, 23 October 1981, and Fruit and Vegetable Exports from the Mediterranean Area to the EEC, World Bank Staff Working Paper No 231, March 1979.

While the Community is a net importer of vegetable oils, the cost of Community aids to the olive sector has been rising as the production of olive oil has exceeded consumption. Most forecasts regarding growth in consumption of vegetable oils in the Communities are not optimistic.

The World Bank also was not optimistic about the market prospects for fresh fruits and vegetables in the EC. They said "the principal conclusion to be drawn from our price analysis is that in constant terms the EEC market outlook for fresh horticultural imports will, in regard to most commodities, continue to deteriorate further through 1985." (1) The Bank suggests that after the entry of Spain the EEC will shift from a net importer to a net exporter of fruits and vegetables on an annual basis (2).

All of these projections were made before the current economic downturn which has gripped the world economy. The slowdown or complete absence of economic growth will have an adverse impact on consumption growth of many Mediterranean products in the local regions, in the Community at large, and in key export markets. For instance, the balance of payment problems of many of the developing countries will adversely affect their imports of some of these products. The same will be true for some of the Eastern European countries which are important markets for some Greek food exports. In the United States, which has been one of the most rapidly growing markets for wines, a combination of recession and changing tastes is slowing the rapid growth in wine consumption. Thus, the prospects are not good for significant market growth for most of the products which the Mediterranean regions export. At the same time that producers in these regions face a market with limited growth prospects, the traditional outlet for excess workers in agriculture and the agro-food industries has been blocked by the high and rising unemployment levels throughout the European Communities. This means that farmers and owners of many agro-food industries which might in times of economic expansion move to other sources of employment will be forced to stay where they are; and, thus, the problem of restructuring of both agriculture and the agro-food industries will become greater.

This overall market context is of some importance because it implies that the European Communities will be dealing with two problems simultaneously and that the short-view solution to one problem may make the longer-run solution to the other problem more difficult and more expensive. It is already clear that the total market situation in several of the Mediterranean products, namely, wine, olive oil and canned tomatoes, will cause the Communities to become involved in aggregate market management problems aimed at dealing with surpluses. Some of the actions in this regard, however, will almost certainly add to the problems of the structure of the agro-food industries. Conversely, many of the policies aimed at dealing with the structure of the agro-food industries probably will increase the problem of overall market management. As we shall discuss later, there is no easy answer to this dilemma. It is, however, important that both national and the Communities policy markets understand the relationship between the two problems.

(1) World Bank, op. cit., p. 31

(2) op. cit., p. 34

V. THE STRUCTURE OF AGRO-FOOD INDUSTRIES IN THE MEDITERRANEAN

REGIONS OF THE EC - OBJECTIVES

Before examining the structures of the agro-food industries in the regions under discussion, it appears useful to consider what might be desired as a state of affairs.

One important contribution of the agro-food industries in a region is to provide a source of employment and income for people in the region, especially for persons in rural and more remote areas. Of course, ideally, the employment provided should be stable and remunerative, i.e., it should provide reasonable wages and working conditions for regions which generally experience problems of high unemployment and chronic underemployment. This objective of providing regional employment in agro-food industries is related to the concept of increasing the value-added to the raw product in the producing region as compared with having the functions which add value performed elsewhere.

A second desirable attribute which is sought in the agro-food industries is that it perform the functions and/or provide services efficiently, in both a technical and economic sense. This implies that the sector is organized in a way which uses the most effective combination of labor and capital which can be put together in order to perform the functions that it provides at the lowest possible costs. It should be noted that this objective is not necessarily entirely consistent with the maximum provision of employment in the region. In other words, the most efficient organization of many agro-food industries might reduce rather than increase employment in them.

A third criterion which is of importance, especially in this instance, is that the agro-food industries be organized to provide the highest possible price to the farmers who produce raw farm products which pass through the system. One aspect of this pricing is related to the efficiency with which the various functions are performed. Since the products involved all eventually must compete for the money of the final consumer of the product, it generally follows that farmers who sell their product to high-cost, inefficiently organized, sectors of the agro-food industries will receive lower returns for their product. Such farmers are in a sense "more distant" from their markets than are producers served by an efficient, low-cost agro-food industry.

Another aspect of pricing of products is related to market power and the possibility of some sectors extracting "excess profits" at the expense of farm producers. This situation can and does exist, though perhaps less often than is generally thought, for several reasons. One reason it may occur is that agricultural production is specially dispersed and the number of selling points available to farm producers is often limited. A second reason is that parts of the agro-food industries have a better knowledge of market conditions than do other parts of the system or farmers and this knowledge gives them an

ability to obtain a price advantage. In some cases the control over certain parts of the agro-food industries chain gives firms a monopoly position which allows them to influence prices in ways which are to their benefit and to the disadvantage of producers.

Finally, the agro-food industries should reflect back to farm producers in an accurate way the preference of consumers regarding quality and other characteristics of the farm products desired by consumers.

A number of these concepts are embodied in the term "value added" and there is often a general desire to maximize the value added in a region or by enterprises controlled by farm producers. Some of the value added in the agro-food industries comes from functions which must be performed where the final consumers are. This is true of retailing, most consumer advertising, etc. Producing groups generally do not control these functions carried on outside their regions and there is no evidence that doing so would be wise use of their resources. Some of the functions, such as transportation, are fixed in space and the decision as to whether they can and should be performed by groups based in the producing regions is related to capital use and other considerations rather than capturing "value added". In some other situations farmers would be better off if the "value added" were reduced rather than increased, even where the farmers own the industry. This would be true where a high-cost inefficient industry caused the farmers to receive a lower price for their product.

On the other side, however, there are many situations where increasing value added can and should be legitimate objective. In many cases the products are now moved out of the regions to other areas or countries for further processing and transformation. Many of the activities now performed elsewhere could, if efficiently organized, be performed in the producing regions and improve employment and income there.

## VI. THE CURRENT STRUCTURE OF THE AGRO-FOOD INDUSTRIES

In the Mediterranean regions of the Communities the agro-food industries account for a significant amount of non-agricultural employment. In Italy, it is about 29 percent; in Greece 17 percent; and in France 7 percent. Thus, these regions, which are less favoured with manufacturing and service employment, have a significant dependence upon employment in these food-related industries.

Some common characteristics are associated with employment in agro-food industries in these regions. First, the employment tends to be heavily seasonal. This is associated with the highly seasonal nature of the various crops in the region, and, as we shall see, also associated with the specialized way in which the agro-food industries tend to be organized in these regions. The employment is especially seasonal in certain aspects of the industry such as fruit and vegetable processing, olive oil pressing and wine production. Some of the agro-food industries associated with milk, meat animals and cereals processing is less seasonal, both because production is less seasonal for some and because the industries tend in some cases to be organized somewhat differently.

Apart from the management level personnel, most of the employment in the agro-food industries is relatively unskilled labor and probably relatively low-paying as a result. On the other hand, inasmuch as these regions contain a high proportion of unskilled workers, it is quite useful to the regional economies to have employment opportunities for such workers, whereas the location of industries in the region which require high skills might also require that a substantial amount of labor be recruited from outside the region. Therefore, a major issue should be how can the activities in these agro-food industries be organized in order to increase labor productivity and employment stability.

Another feature of the seasonal labor demands in the agro-food industries is that its heavy seasonal demand falls at the same time as does the heavy seasonal demand for farm labor in the same regions and, thus, farm producers and the associated agro-food industries tend to be competing for the same local labor at the same time.

Another feature of the major agro-food industries firms in the Mediterranean regions of the Communities is that the firms are small, measured either in terms of physical capacity, employment or gross sales. For instance, in Greece 43 percent of the fruit canning plants are classified as small, as are 60 percent of the tomato processing plants, 80 percent of the vegetable canning plants and half of the citrus processing plants. Moreover, whether private or cooperative, the firms generally are independent, single-plant firms and thus are not affiliated in an operational way with national or international firms. There are some notable exceptions to this, especially in the grain processing and the oilseed crushing business. There are several

reasons for this small size and independent status, and these features have many ramifications for policies aimed at dealing with the agro-food industries structure.

Some of the reasons for the small size of the firms are obvious. Many of the firms in citrus, olives, wine, tree fruits, etc., were developed to serve relatively small geographical areas and to minimize the transport problems and cost of farmers. Many of the products are bulky and perishable. Moreover, there is a belief on the part of many producers that their location-specific products are unique and, thus, there is a resistance to loss of products identification. In products where self-consumption and local consumption are important many of these firms were developed to serve those needs and still are important in that regard.

There is a belief expressed in Communities' policy, national policies and in the country studies that a shortage of capital is also a factor limiting the size of these firms. The fact that most of the firms are small and not part of a national or multinational corporation would support the view that they lack access to national credit markets. As a result, a multiplicity of regional, national and Communities financing schemes involving loans and grants have been developed. However, given high interest costs, inflation and a long time lag between the beginning of a project and receipt of the assistance, individual firms still face high credit costs which many reported as a major barrier to expansion and improvement. Thus, we find one of the several conflicts which are inherent in the issues being discussed. The structure of the firms, the size of most of the firms and their economic organization and location make credit scarce and expensive to most of them. This situation was reported frequently by firms when interviewed. At the same time, however, there is over-investment in the industries in that there exists substantial over-capacity in most lines of activity. In fact, in most product lines the problem appears to be that there is over-investment in the industry and under-investment in individual plants and firms.

Another characteristic frequently observed is that many of the firms tend to run heavily to single-products firms. Part of this is due to the nature of the product. The making of wine or pressing of olive oil obviously involves specialized processes and equipment. Therefore, at the processing stage of the agro-food industries it is obvious that multiple product operations are not feasible for some products. However, even where they are feasible, such as in fruit and vegetable processing plants, it appears that multiple product firms are not common in these regions.

The concentration on a single product, together with small size, has several adverse economic effects. One is that it makes the problem of seasonal use of plant and equipment even greater. It results in high costs in industries where there is substantial economy of scale and, as such, virtually prohibits expansion of many of the firms into activities which might improve its market position and/or increase the value-added produced by the firm.

Moreover, concentration on a single product increases the firm's risk in two ways. One is the risk of variation in product output due to weather, the second is increased vulnerability to fluctuations in market demand.

One function which small, single product firms find difficult to undertake is national and especially international marketing. Small, single-product firms cannot afford substantial technical staffs, sales staffs, transportation divisions or export divisions. Thus, they are at the mercy of large-scale buyers from supermarkets chains and are dependent upon brokers for national or international sales.

Another important function which most of these small firms cannot afford is product innovation and quality control improvement. Both are dependent upon skilled technical personnel which generally are too costly for small firms. The same is true for internal training programs which might increase productivity.

Another feature of these firms in all of the regions is the heavy predominance of cooperatives in the agro-food industries. This is partly a matter of historical evolution and partly a matter of national public policy in each of the three nations involved. It is not the purpose of this study to question national policy in this regard, but some of its implications need to be understood. The significance of cooperatives does not arise from their particular legal form, but from the limits that their ownership and control put upon the way in which they are organized and function.

In most cases the coops are local and many have multiple functions at the local level, i.e., the provision of farm supplies, credit, etc., which are not related to their agro-food industries functions. Second, by definition the control of the coops is local, the managerial staff generally is local (and often part-time), and their focus upon local service is narrowly defined. Moreover, cooperatives sometimes are used as an instrument of national social-political policy such as to provide credit subsidies or as intervention and storage mechanisms. Such functions divert management efforts from improved marketing activities.

Because of these characteristics which are often found in farmer cooperatives there is little or no vertical integration up the marketing chains by cooperatives. In France there are some firms which are jointly owned by cooperatives and private businesses and which perform marketing functions but these arrangements seem relatively rare.

It was frequently mentioned in the country studies that currently regional aids were heavily tilted toward assisting cooperatives. This belief results in concern and resentment on the part of some of the private firms interviewed in some of the regions. There was a feeling expressed by private firms that the special measures favouring cooperatives were not fair : the measures cited included subsidized credit and favoured access to other forms of assistance.

Another element commonly found among a majority of the firms was the substantial under-utilization of their existing plant and equipment. This has several adverse results. One is that the costs of the processing are increased by the inability of the firms to use their full capacity. The existence of widespread excess capacity also inhibits the ability of small firms to expand operations to the point where they can achieve economies of scale in activities where substantial economies of scale exist. Also, the low volume, high-cost nature of the industries with over-capacity results in a series of firms which are not profitable enough to adopt modern processing technology and modern product handling technology.

The end result is a classic dilemma for policy makers. It is clear that taken as a whole, there is substantial need for investment in larger, more modern processing facilities to handle much of the products in the Mediterranean regions of the Community. At the same time, however, the use of new subsidies to build such facilities will increase total capacity in the industry, may reduce the level of utilization of existing facilities and increase the economic and political pressures for measures to assist the older, less efficient segments of the industry which will have to compete with the new and modern units. This implies that there is a serious need for rationalization of the structure of the industry.

Another common problem faced by many of the firms in the areas is that they have relatively little control over the quality of the product they receive. This is especially true in citrus, wine and olive products where what is produced is determined in part by production decisions as to varieties made years or even decades earlier, and in part determined by year to year variations in weather and growing conditions. For instance, in orange processing, the varieties grown in the region generally are not well adapted for juice making and, moreover, the quality is further affected by the climate in the growing areas. In the case of wine, it is not possible to make high quality wines from certain types of grapes or from grapes grown under certain conditions. Local processors of citrus or wine have to use what is grown locally and improvement of quality is a long, slow process, usually requiring more economic incentives than local processing plants can exert.

There are two EC policies which may have different effects upon these problems. One policy is the structural policy which is designed to encourage the switch to new varieties where market demand is growing. This will, over time, help deal with some of the raw material quality problem. At the same time, however, the EC policy which diverts surplus products into other uses (i.e. distillation) may help maintain the market for low quality products and reduce producer and processor incentives toward quality improvement.

There are two notable exceptions in terms of quality control of products. In the case of tomato processing where growth has been extremely rapid in the Mediterranean regions of the Community, the economic organization of part of the industry has been quite different. Much of the industry is relatively new by most standards. The raw product variety is determined by the processors,



usually by supplying the seed and specifying production methods. Thus, product quality control allows part of the industry to be organized with large efficient plants which are low cost and efficient and can perform national and international marketing functions. However, a substantial number of small and less technically efficient firms also exist.

The same control over raw product quality can be found in other processed vegetables where processing industries have been developed to meet market demands. In general, the problems of inadequate size, lack of product control and low levels of utilization are less widespread in these industries than in many of the other industries. Of course, a key element in such product quality control is the ability and willingness of farm producers to adopt new varieties and production methods.

Broadly speaking, the Mediterranean regions of the Community seem to have two markedly contrasting situations which affect both the basic agricultural production systems and the associated agro-food industries. They might be typified by the phrases "grow (and process) for markets" and "market (and process) which is grown". This distinction is far more important than the amount of processing involved, for almost all agricultural products except fresh fruits and vegetables are processed in some fashion.

Significant parts of the tomato processing, pasta, flour, milk and meat processing industries seem to be excellent examples of agro-food industries where the product is grown for markets and the agro-food industries are organized accordingly. Wine and olive oil are prime examples where the agro-food industries are organized to process what is grown. The citrus processing industry and a part of the fruit processing industry also fall into this category.

The latter category of the agro-food industries appears to be the area where the problems of small size, inefficient organization, over-capacity and low level of technology seem to be predominant. These also are the firms where single product and single functions predominate and where, thus, the value-added is lowest. Cooperatives seem to be the most common form of organization of this sector of the agro-food industries.

There is one feature of the agro-food industries in these three regions of the Community which is notably absent. The country studies found little or no evidence of significant backward or forward integration of the agro-food industries in these regions with industries outside the region. This means that few of the processing and marketing facilities in the region are owned or directly controlled by large firms which carry out a variety of functions within the system either in the regions, nationally or internationally. Some exceptions to this are found in the cereal processing industry and some milk processing activities in France, but in most products and in most areas this is not the case.

The absence of this integration has several implications. One implication is that most of the capital investment, management expertise and economic and technical organization comes from within the region. This had implications for the competitiveness of the firms in distant markets.

A second implication relates to efficiency. The reason for integration is to achieve scale, to increase control over various processes in the system and thereby to reduce costs of getting products from producers to consumers. In other words, vertical integration increases or makes easier the coordination of various elements in the system. It is obvious in the country studies that in most activities in most products there is little apparent coordination of activities.

These general structural characteristics vary from product to product and region to region. In order to better examine the relationships between products, product markets and structure, a series of sections follow which discuss the situation by product. These overviews by products are drawn from the product discussions in the country studies and from interviews with firms involved in the processing and marketing of specific products.

#### Wine :

In each of the three regions studied wine presents a major problem and the problems are similar and related. In each of the regions wine production far exceeds the local consumption levels; markets outside the region and even outside the country have become more important. However, for a variety of reasons many of the firms which produce wines in these regions are not well suited to compete in that part of the wine market which is still growing.

One reason for the problems is that the three regions tend to produce a high proportion of lower-quality or ordinary wines and it is this portion of the wine market where demand is declining both in national and international markets. An indication of this problem is shown by the fact that only 10-15 percent of Greek wine is classified as V.Q.P.R.D. In France the Mediterranean regions produce 61 percent of all French wines but only 28 percent of the "AOC" (top quality). The exact proportions are not available for the Mezzogiorno but the bulk of the production is not of the top quality.

One reason for the high proportion of production of ordinary wines is the growing conditions in the regions, which in some areas of the region are not conducive to production of high quality wines.

A second reason for the heavy concentration of production in lower quality wines is that in many cases the varieties of grapes grown are not suitable for the production of higher quality wine. This, however, is a matter which is

not easily remedied inasmuch as the life of a vineyard may be as long as 40 years and the cost of removing an existing vineyard and replacing it with a new variety is very high, including the cost of foregone income experienced while the changeover is occurring. While the EC has a program to encourage the introduction of improved varieties, as yet its effects have not been large and will be felt only slowly over time.

A third reason for the heavy concentration in the production of ordinary quality wines is that a large proportion of the firms involved in wine production in these three regions lack the necessary facilities to produce high quality wines even if the quality of the grapes available would make it possible. Thus, you have a situation in which a self-perpetrating cycle is established.

Many of the firms producing wine in these regions are small, or at least too small to achieve the economies of scale possible in the operation of a winery. Moreover, in most cases they are far too small to develop sophisticated national or international marketing programs for their products. As a result, the products are often sold in bulk or to brokers or buyers from supermarkets in northern consuming areas. It also happens that substantial quantities of lower quality Italian wines are exported in bulk to the South of France for blending purposes. This trade had created substantial tensions from time to time between the two regions. In addition, both regions resent the taxation policies of some of the northern member countries regarding wine.

Each of the Mediterranean regions of the Community view the other regions as their competitors and appear to view the competition as unfair in one fashion or another. As yet there appears to be little attention given to the fact that Spain and Portugal offer substantial competition in some international markets and will offer the same competition for northern markets within the Community when they become full members of the Common Market. At the present time producers in the three regions seem to be much more conscious of their common competition than of their common problems.

There are three problems which are common to a major portion of producers of wine in these regions. One problem is that the production of lower-quality wine substantially exceeds the market demand for such wine either within the EC or outside it. This problem is not new but is increasing rather than decreasing as output grows due to higher yields per hectare of vineyard and demand for lower quality wine falls. The main measures to deal with this problem has been distillation which cost the Guarantee Section of the Community budget 618 million ECUs in 1981 and amounted to 11 percent of the value of which production in the Community that year. Measures have also been taken to limit the area under vines and to remove vineyards from production.

A second problem is that many wineries in the Mediterranean region are both small and have obsolete or inadequate production, processing and storage.

Thus, a significant need exists for the upgrading of the facilities to enable the production of higher quality wine and to enable more of the wineries to bottle their product.

A third problem is that many of the wine producers are too small to be able to extend their marketing functions to national or international level and, thus, capture the value added accruing to these functions. Even if many of the existing facilities were modernized it seems unlikely that they would have enough sales volume to undertake such activities efficiently. This suggests that if these activities are to be carried out they will have to be organized to serve a group of smaller firms or cooperatives.

Examples of such organizations are found in the French regions. In Mediterranean France there are situations where several small producers have developed a joint national and export marketing program. Another case was cited where a private firm and a cooperative have formed a successful joint enterprise for the same purposes.

There is much discussion of the desirability of product differentiation by wine producers. It seems, however, that this discussion may be based more upon hope than hard facts and it is not clear that product differentiation and identification to the consumer level is either feasible or profitable, given the nature of the product and the changing nature of the market.

Increasingly the retail market for wine in the large northern EC markets, northern France and major export markets like the U.S.A. are dominated by supermarket chains and/or other large scale distributors. It is not at all clear that consumers who buy wine in these retail stores will pay extra for product differentiation unless it can be clearly established that the product is superior in quality.

Based upon the country studies and other information available it appears that a great deal is known about the technology of wine production and very little is known about the economics of either wine production or marketing. This is not especially surprising, given the long history and tradition of wine production in Europe which long predates the study of economics and/or marketing. However, in these studies and elsewhere it is obvious that wine producers are faced with serious economic problems about which solid information is lacking. It is unlikely that either public or private solutions will be found without additional information.

Several issues highlighted by persons interviewed in the regions point out a lack of information. For instance, much is made of the differential taxation of wine and beer in northern member states of the Community. This basically is an issue of consumer response to price. How much do higher wine taxes reduce consumption in these countries?

Another question is the economics of bottling. Most of the Greek wine which is exported and much of the Italian wine which is exported to other EC countries moves as a bulk product to the country where it is to be consumed. This is partially because its main value is for blending purposes. But, to what extent does the high cost of moving heavy bottles over long distances exceed the value added which would be achieved if the bottling were done in producing areas? This question clearly needs to be answered before large investments are made in new facilities.

Similar questions need to be addressed regarding product differentiation and advertising. It is not clear that a majority of the producers of wine would be better off attempting to establish brand identification at the consumer level for their products, given the high cost of doing so in distant markets where retail outlets are not under control of the producing units. This and other issues raised by the country studies as to the nature of the markets for wine and the economics of location of certain activities need to be answered before either national or Community programs are undertaken to encourage certain activities.

Given the current and prospective market imbalance for lower quality wines, the programs needed for removing excess market supplies of low quality wine and the need to upgrade facilities and improve the functioning of local wineries are all interrelated. If not properly conceived and executed, Community programs in the two areas may work at cross purposes. For instance, it is asserted that the present distillation measures may actually encourage the production of low quality grapes and wine, already clearly in excess supply. Grants and loans to individual wineries to upgrade facilities, changes which are badly needed, may at the same time add to the problem of too many firms without adequate size to benefit from the substantial economies of scale which exist in certain activities of the industry.

It is also clear from the country studies that national policies regarding the industry are at cross purposes in many cases. This is true, not only at the taxation level, but also at the level of production definition, production aids, movement of products and assistance to firms engaged in processing and marketing wines. While it is obvious that national policies will reflect national pressures and national interests as they are perceived by affected groups within individual member states, it seems desirable that Community policies reflect more than these views and that they have a Community-wide focus.

#### Tomatoes :

The three Mediterranean regions of the Community are large scale producers of tomatoes for consumption in both fresh and processed form. The country studies cite parts of the tomato processing industry as one of the most

efficiently organized in that there are a significant number of relatively modern processing plants, generally organized on a scale large enough to take advantage of economies of scale in processing and marketing.

Tomato processing is the one agro-food industry in the regions under discussion where there is a clearly integrated system in which the processors generally have contractual relations with growers and have substantial control over production methods, product quality and delivery of product to the processing facilities. It is also a case where there apparently has been substantial investment of outside capital and talent in the industry in these regions. In some cases there is integration with multinational firms operating outside the region.

It appears now that the total capital investment in tomato processing facilities and the associated farm production exceeds the market demand for processed products. In any event, in 1978/79 a system of payment to processors was instituted for processors who had contracts paying specified minimum prices to producers. By 1980/81, this system resulted in payments to processors which for some of the products almost equalled the value of the raw tomatoes being processed. The disposal of processed tomato products has become a serious problem. Charges have been made that some processors are misusing the system in a fashion which allows them to sell products at such low prices that other processors in other regions of the Community cannot compete. It is clear that there is strong direct competition between producers in different regions of the Community and the producers involved know it.

The situation which has now developed leaves an industry which is still not fully rationalized. There are still a significant number of small, not very efficient, tomato processing plants in the South of Italy and in Greece. However, to upgrade these facilities and modernize them clearly would add to the general problem of potential surplus production. However, to merely abandon some of the less competitive plants will result in reductions in income and employment in already disadvantaged regions.

It will be interesting to observe how this relatively well organized industry which developed as an industry to "produce (process) what can be marketed" will develop if the processor payments shift it to an industry which is paid to "market (process) what is produced". It is a reasonably safe prediction to project that its continued restructuring and development of new markets and new products will cease. One French producer interviewed observed that they concentrated on selected export markets because the processor payments meant that the domestic markets were politically determined.

Citrus :

The two Mediterranean regions (Greece and Southern Italy) produce citrus products which are primarily for fresh consumption; the production of processed citrus products came about primarily as a method of dealing with surplus market supplies of products destined for the fresh market. This, however, creates a situation which leaves the citrus processing industry in these regions at a disadvantage relative to their competitors elsewhere.

Since the industry is not organized primarily to produce orange juice, many of its plants lack the scale required to achieve low costs. In addition, many have been able to adopt the newer, more energy-efficient technologies which are found in some areas of the world where production of juice is the major outlet for orange production.

There are still a number of relatively small (by international standards) citrus processing plants which are not very profitable and which probably would not exist if it were not for the EC processing subsidy paid to remove excess fresh product from the market.

The raw material for orange processing comes largely from varieties produced for fresh consumption, which unfortunately, do not produce either large quantities or high quality juice. In the meantime, the orange juice market in northern members of the EC has been largely captured by third country producers of high-quality, low-priced juice concentrates, especially Brazil.

The domestic market for the orange juice produced in the Community is largely confined to use in citrus-based soft drinks which face intense competition from other soft drinks such as cola drinks. In the face of this competition, the market is slow. Insofar as the export market is concerned, Greece has turned more and more to Eastern Europe, a market which is uncertain as imports are restrained by balance of payments difficulties. Greek entry into the EC also has made some of the countertrade arrangements which previously existed less attractive to Eastern European countries.

In relatively few cases is use made of the by-products of the citrus processing industry. In Brazil and the United States citrus processing plants dry and pelletize citrus pulp for sale as cattle feed and a significant portion of it is exported to the Common Market for use there. It appears odd, given the fact that the citrus producing regions of the Community are major deficit areas for animal feeds, that little attention has been given to the production of animal feed from the by-products of the citrus processing industry in the Community, since it would add to the value-added in the regions and would produce products which could be marketed and used directly in the regions where it is produced.

Given the fact that the citrus processing industry exists as an outlet for excess fresh market supplies and that the available varieties do not produce good quality juice, any attempt to rationalize this industry will require a

multiple approach. The use of border protection measures against higher-quality lower-price juice will not increase the consumption of juice from the Mediterranean region in the northern member states. The present uses as bases for citrus-based drinks provides a limited market as it is now constituted.

One element needed to deal with the problem is the introduction of new varieties which have better characteristics for juice purposes. This program is authorized by Council Regulation (EEC) No 1204/82 relating to improving the production and marketing of citrus fruit. This conversion process will be slow, however, and since much production will be primarily for fresh market consumption, ways must be found to better market excess fruit from that line of production. Since the growth in consumption of fresh citrus is likely to be limited the problem of at least periodic excess production will continue. This means that ways must be found to increase the marketability of the juice which is and will be produced from these regions.

Apparently if the juice from the type of oranges produced in the Mediterranean regions of the Community is mixed with some quantity of juice from juice-type oranges, a product can be produced which meets consumer taste preferences. If this is technically feasible, the possibilities of doing this should be examined. The possibilities of joint ventures with foreign companies experienced in blending and marketing should be investigated as a rapid way of improving the situation. The alternative appears to be to continue to produce a product which has a limited market both within and outside the EC, even with consumer subsidies or export subsidies.

The third element of a successful strategy involves the lowering of the citrus processing costs. This involves restructuring and rebuilding the current industry to include : 1) Large, modern and energy efficient plants and freezing facilities, and 2) Making mechanism exists under Community regulations to do this and if it is used effectively and vigorously this industry can be made competitive.

#### Olive Oil :

The production of olives, primarily for oil, is an ancient and important source of employment and income for certain parts of the Mediterranean regions of the Community. The ability of the olive tree to grow and produce on poor soil, steep slopes and under dry, hot growing conditions makes olive trees well suited to the production conditions found in these areas. However, the very fact that olive production is old and established creates part of the problem today.

By the large, olive production, especially in Greece, takes place on small farms, often fragmented, and upon land which is not well suited for other



economic uses. The heavy dependence upon hand labor for picking and the rapid deterioration of the quality of oil if not pressed promptly has resulted in the establishment of many small processors organized to serve the peak needs of local areas. This together with customs regarding the isolation of individual production makes for low efficiency and low utilization of capacity at other than very peak periods. Thus, the country studies reported 3 529 olive crushing plants in Greece and 8 399 in the South of Italy.

Many of these plants do not have modern equipment and are too small to benefit from any economies of scale which may occur in the industry. Moreover, in many cases their small size and volume prohibit them from performing many functions such as retail packaging, sales and distribution.

Matters are even further complicated by the nature of the market for olive oil. In Greece and Italy, olive oil is the traditional and preferred oil; but in other member states, especially in the North, vegetable oil consumption is a much lower proportion of total oils and fats consumption and olive oil must compete with other vegetable oils either produced in the Community or imported duty-free. Moreover, because of the unique and distinctive characteristics of olive oil it is not clear what measures would be effective in increasing consumption in those areas where it is not a traditional part of the diet.

Thus, the market for olive oil is growing slowly, at best, and the future growth prospects are not encouraging. The problem is worsened by the high cost of olive oil relative to competing vegetable oils and the fact that it does not always have uniform quality standards.

As a result, the Community has become involved in an increasingly expensive market intervention program to maintain producer prices for olive oil and thus, to protect producer income. This, however, may turn to be self-defeating to the extent that results in increasing the consumer price of olive oil relative to other vegetable oils and thus, erodes even further the market demand for olive oil.

At present the Community is a slight net importer of olive oil, primarily from Mediterranean countries outside the EC. When, however, Spain becomes a member of the EC this situation will change and the larger Community will be a substantial surplus producer. Moreover, the existing Greek and Italian producers and processors will then face substantial internal competition in the limited market for olive oil.

Any strategy for dealing with this problem has to include several elements. One is product improvement, another is market development and the third is cost reduction. The ability to achieve restructuring of the processing industry is crucial in carrying out all three.

If the olive oil industry is to be improved, it must be able to compete in the consumer markets for fats and oils outside Italy and Greece. To effectively

compete will require much broader attention than merely the competition from other lower-priced vegetable oils. It will require a broad strategy which looks at both the possible adverse effects of price policy on markets but also at product quality and product acceptance.

Olive oil is a product where the case is strong for greater product standardization than now exists and improvement in product quality. Whereas product differentiation and regional or even producer identification may be both feasible and profitable for wines, it would not appear to be the case for olive oil. What is needed is the ability to promote a genetic product as a superior product which means that the product must have a uniform high quality. Progress in this regard is crucial to mount a serious market development program.

The achievement of this improved product is partially dependent upon an upgrading of a significant portion of the current processing facilities now existing. The indications are from the country studies that there are wide differences from firm to firm in the size, technology and efficiency of the firms involved in crushing, refining, processing and distribution of olive oil. It also seems likely that a substantial reorganization of the industry, if it could be achieved, would increase the income of producers, by lowering costs for the processing function. This is an industry where the relationship of firm size, location and other production factors, are significant elements in the development of the processing industry. Thus, any consideration of restructuring should be a systems approach which fully considers the farm production issues as well as the processing and marketing issues.

#### Vegetable Processing :

The vegetable processing industry varies in importance to the three regions in the study. In the case of Greece, the processed vegetable industry is small in size and not of great significance. In the Mediterranean regions of France and Italy vegetable processors are of greater importance.

The Greek industry is limited for several reasons. One is that the local (national) demand for processed vegetables is limited by the competition from year around supplies of fresh vegetables. Second, many families do not have the ability to store frozen vegetables in the home. Finally, the growing conditions of some vegetables of the quality ideally suited for use in the processing industry.

Some of the same conditions pertain to the vegetable processing industries in the other two regions. Processed vegetables face strong and continuing competition, both from fresh products and, in some cases, from processed products from other sources. The overall demand for vegetables in any form is growing slowly at best, and for some products not growing at all.

Increasingly the processors of vegetables find that their outlet to consumers is through the large supermarket chains with large-scale distribution points and, therefore, with great buying power. These chains often want products which carry labels of the chain and thus, product identification at the consumer level is difficult, if not impossible, for the many smaller processors located in the Mediterranean region.

Many of the problems associated with the vegetable processing industry are directly related to production conditions in much of the region. The small fragmented farms make large scale production and mechanization uneconomic and thus, result in high cost raw materials. Moreover, the generally small scale and limited product line of many vegetable processors make the introduction of branded product lines and national and international sales campaigns uneconomic. Apparently, unlike the situation in parts of the tomato processing industry, it has proven difficult for the smaller vegetable processors to establish control over their product quality and supply inasmuch as they compete with fresh markets for the raw products at any given time. Thus, in many cases they are handicapped by both product quality and excess capacity.

As in the case of other products, the cooperatives are heavily involved in the vegetable processing industry and apparently in some situations the advantages provided cooperatives by national policies is resented by many of the private firms which must compete with them.

Given the fragmented nature of basic production and of the associated processing plants, the task of improving the processing industry for vegetables is difficult and complex. There already is excess capacity in the processing industry so that the addition of new efficient capacity will make the situation of the present firms and their associated producers worse off. Thus, as is the case in several other areas the rationalization of the industry needs to be carried out without substantially adding to total processing capacity.

#### Canned Fruit :

Canned fruit is an important product to two of the three regions under study - Greece and Southern Italy - and less important to Mediterranean France. It is another product where the market growth has been relatively slow and is likely to remain so for the foreseeable future. Greece and Italy are large net exporters of canned fruit, whereas France is a net importer, with much of its imports coming from Greece and Italy. The Northern members of the Community, especially Germany and the United Kingdom, are the major export markets for the Mediterranean regions.

The Community market for canned fruit has been protected from outside competition through tariffs which raise the cost of imports to levels above internal prices and thus, limit imports to higher quality products from a few countries. Thus, the major competition is between producers in the three Mediterranean countries in the Community and between both fresh and processed products from the three regions. Moreover, the use of processing as an outlet for surplus fresh market products increases the competition for some products originally grown primarily for processing.

As is increasingly the case with most Mediterranean products, the primary consumer sales point for canned fruit is through supermarkets. Here again much of the product carries the label of the supermarket and processors have found it difficult to establish brand identification and brand loyalty. Given the relative homogeneity of the finished product, attempts at product differentiation are likely to continue to be costly, difficult and in many cases unsuccessful.

To a larger extent the fruit canning industry is one which has been developed to "produce for markets". Varieties have been developed which are suited for processing and the processing facilities have been built more recently than is the case of some of the more traditional processing industries such as wine and olive oil. Thus, the machinery tends, on the average, to be more modern, the plant sizes large enough to capture major economies of scale and where local production is available, many plants are equipped to handle more than a single product. In the Greek case some of the plants are not well organized because plant expansion has resulted in internal inefficiencies.

Because of the wide fluctuations in raw product output due to weather, the fruit processing plants have substantial excess capacity in some years, but the industry does not appear to have the chronic widespread excess capacity found in certain other sectors of the agro-food industries in the region. However, plants in certain locations face severe problems. This does not mean that problems in this regard will not arise, especially as competition within the Community and changes in Mediterranean agriculture slowly reduce fruit production in some of the less favoured areas.

Processors subsidies have been instituted within the Community as a method of maintaining or improving growers' incomes. As is the case with the other processor subsidies, many processors believe that the subsidy program is being operated in a way which provided unfair competition to some producers in other regions. In addition, some people apparently believe that the processor subsidy does not differentiate enough for product quality.

There is relatively little that can be done about some of the features of this branch of the agro-food industries.

The industry will continue to be seasonal because the production season is limited by natural conditions and even multiple product plants only help extend the use of facilities by a modest amount. The raw product is highly

perishable and thus, must be processed immediately after harvest and there is no known technology which will change this fact.

At the present time the fruit canning industry varies as to its integration into the marketing function. Even where marketing is carried out by the processors it is not clear that it is performed at lower cost than when organized through brokers and there is no indication that prices are determined by other than the major retailers and/or importers.

#### Fresh Fruit and Vegetables :

The market for fresh fruit and vegetables is for two of the three regions - Southern Italy and Mediterranean France; a mixed market - local, national and international. In the case of Greece, the market for fresh vegetables is largely local and national because distance and transport costs effectively limit Greece from competing in the EC market for these products.

Producers of these products are protected from competition from outside the EC during the peak production periods within the Community, but the EC does import large quantities of these products during off-seasons.

The French Mediterranean region appears to have the most favourable situation regarding most of these products. During the peak summer production season they have an immense local market increased by the large influx of tourists into the region. French producers also have a location advantage relative to the large urban markets in northern France and in the northern member states where the seasons are later and shorter. Southern Italian producers also have seasonal tourist demand but they are further removed from the large national population and very far removed from the northern European markets.

The country studies suggest that the state of marketing fresh fruits and vegetables is directly related to the state of organization of the local and national systems. It appears that the French situation is relatively well organized with a heavy emphasis upon cooperatives, that the Italian market is less well organized. The Greek study suggests that the market in Greece is less well organized.

As in the case for some other products much of the competition for markets comes from within the regions. For instance, Italy is finding its position in the fresh markets being threatened by strong competition from processed fruits and vegetables produced in Italy and the other Mediterranean regions which have more efficient production and marketing organizations.

The market for fresh fruits and vegetables is highly unstable due to substantial fluctuations in supply relative to a stable and highly inelastic demand for the products. Part of the variations in supply are due to weather

and growing conditions. Part are due to excess reactions to market prices on the part of producers. Since fruit production has a long time lag between price changes and production response, fresh fruit price variations arise primarily from weather. Vegetable output responds more rapidly and is more often an over-response by producers to previous price conditions.

Given these facts, there is a limited amount that public policy can achieve. In the case of fresh fruit, the diversion programs now used in some cases can help stabilize prices in the face of large crops. There is a danger, however, that seasonal price stabilization programs will in fact encourage so much production that what is now periodic seasonal surpluses become continuing structural surpluses. This is especially true if the seasonal price stabilization programs should operate so that they become the primary and continuing outlet for low quality production and remove market pressures for the production of products more desired by consumers.

There appears to be substantial variations in the information services available to producers and marketers of fresh fruit and vegetables in the different regions. One of the public services which will reduce the likelihood of over-supply and low prices is improved reporting of current market prices and forecasts of future prices. At the present time the policies which exist appear to be largely reactive in terms of dealing with problems after they have occurred and the responses are largely political responses. In the area of fresh product marketing it is likely that more active measures may over a period of time be more effective. Improved market information is one such program which should be considered.

In addition, attention should be given to improving the organization of physical facilities for marketing fresh fruits and vegetables. One such complex is the "cold chain technology" which is being slowly adopted in the marketing of fresh products. Any changes which improve quality, reduce losses, extend product life and otherwise make the product more appealing to consumers, is likely to be to the benefit of producers, if the costs are not too high. This suggests that aids which aimed at the development of more efficient use of integrated modern technology throughout the marketing chain might be one of the most productive ways of improving the situation for producers and marketers of fresh fruits and vegetables.

#### Meat Animals :

In a sense, meat animals are not a Mediterranean product inasmuch as they are produced more commonly outside the region than in it. In fact, all three of the regions under discussion in this study are deficit producers of one or all meat animals and import substantial quantities either from other countries or other areas of the individual country or both.

A major reason that these regions are deficit regions in the production of meat animals is that the natural growing conditions are such that the local production of some feed is high cost. The steep slopes do not produce good forage except for sheep and goats. All of the regions are deficit in the production of feed grains and are not organized for the large-scale importation of animal fodders or for efficient conversion into such products as pork or poultry. The generally small size of the farms keeps animal producers from optimum size and keeps producers from being able to adopt cost-reducing mechanization and modern technology.

The fact that these regions are deficit in these products also means, however, that the local high-cost production must compete with low-cost, more efficient producers of these products located outside the regions, protected only by the transport costs. Transport costs are not very much protection for relatively high-valued products which are storable and transportable. The competition from these outside sources is an obvious source of concern to persons in the region and also affect the way in which agro-food industries associated with meat animals are organized.

There is one common feature which the three regions share. Historically, a series of small not very efficient slaughterhouses were developed, often as municipal enterprises or via public mandate, as a method of achieving some minimum level of sanitation and quality control in the process. There now exists throughout the regions a large number of small, badly organized slaughter facilities with many deficiencies in terms of both public hygiene and economic efficiency. There often is substantial underutilization of capacity, poor and uneconomic use of by-products, inadequate waste disposal, and high costs.

Here as in so many cases, the goal of substantial modernization of the business conflicts directly with the interests of many local facilities. Moreover, since the Community as a whole is a substantial surplus producer of all meat except sheep meat, requiring large export subsidies to sell outside the Community, there is a partial conflict between Community-wide concerns about excess meat supplies and public measures which would stimulate further meat output in these deficit regions. Even so, in the interest of assisting the producers of meat animals in these Mediterranean regions, it appears that attempts to rationalize and upgrade the slaughter facilities should continue.

Meat processing facilities appear to be primarily private in these three regions and they are organized to serve the local markets. The success of local firms organized to fill these local markets needs apparently varies, but there is no indication that these individual problems are pervasive as is the situation in some other agro-food industries, including the local slaughterhouses.

Despite the total surplus of meat and dairy products in the Community, a strong case can be made for action to improve both the production and the processing of meat animals in these regions. Whereas in other parts of the

Community producers and processors face different problems, in these regions the aim should be to reduce costs and improve their ability to compete in local markets.

Given the inherent disadvantages that these regions face in the production of certain kinds of livestock, there is little reason to expect that even significant improvements in the agro-food industries relating to meat would change the deficit situation markedly. Therefore, any measures which are aimed at this sector should concentrate either on problems related to the general improvements in the organization to serve local markets such as slaughter facilities and cold storage facilities or on specific products where these regions have a possibility of being competitive.

The one category of livestock where the Community is not self-sufficient and of importance to these three Mediterranean regions, is in the production of sheep meat. However, there is no evidence that the agro-food industries structure is a significant cause of the lack of interest in expanding sheep production. Rather it appears that the decline of the industry is associated with the small farm structure which has traditionally been the source of sheep production and perhaps, the lack of public research and advisory efforts on ways to improve the efficiency and lower the cost of sheep meat production in the regions. Given the fact that these regions have a national advantage and history of sheep raising and that the market for both meat and cheese is good, attention might be given to ways to restructure and revitalize this industry.

#### Milk Processing :

As is the case with most categories of meat animals, the Mediterranean regions of the Community are deficit in milk products. This deficit is explained largely by the high cost of producing milk products in the region as compared to other regions in the Community.

There are several reasons for the high cost of production for cows milk in these regions and their resulting deficits to meet local consumption needs. One reason, especially in Southern Italy and Greece, is the small herd size of dairy farmers with the resulting low levels of mechanization, low labour productivity, and low levels of output per cow. Because of these small and widely dispersed herds, the cost of collection of raw milk is high and the quality level often is low. The size of the processing plants often is too small to benefit from the efficiencies of scale which are possible in fluid milk processing. The profitability is often too low to invest in modern cost-reducing technology.

The exceptions to this generalization are found where large-scale dairy farms have been developed along with new and efficient fluid milk processing plants. Those enterprises suffer, however, from the fact that in general the



regions are feed-deficit regions and that the importation of either mixed feeds or raw materials is organized such that they will be higher cost than in other regions of the same country or in other member states in the Community. Thus, all of these regions are net importers of fluid milk or its close substitute.

The situation in the production of manufactured cows milk products, i.e. nonfat dried milk, butter and certain cheeses, is even less competitive because the cost of transport from other lower-cost producing regions in the Community is even lower than for fluid milk. There is little reason to believe that any potential reorganization of the processing and marketing facilities for these products would change this situation which is inherently related to the cost of producing and collecting raw milk in the regions.

The situation regarding the production and processing of sheep and goat milk is quite different, but it also contains many similar elements. One important difference is that the consumer demand for these soft cheeses is expanding, both within the Community and outside it, and as a result the market is not strictly a local market faced with severe competition from other regions in the Community or elsewhere. Therefore, there is market incentive to evaluate the ways in which the industry organization can be improved.

On the other side the problems are familiar. The farms which produce sheep and goat milk are small and thus, the collection costs of obtaining the milk are high unless the processing plants are located close to these small producers. The result is a large number of small processing plants which often suffer from the expected problems. They lack enough size to achieve many economies of scale. They are too small to perform many marketing functions, i.e. such as national or international sales. Thus, the value added is low and the cost of adding it is higher than might be necessary.

The prospect of rationalizing the production and processing of sheep and goat cheeses is not very good given the close tie to production. It does appear, however, that there would be substantial value in the development of a more rational, national and international marketing process, which would improve producers' incomes.

There is another reason that greater attention should be given to these products. In many areas of the Mediterranean region of the Community the raising of sheep and goats for cheese production is one of the few enterprises adapted to the hilly terrain and local forage produced on that terrain. These animal enterprises still provide employment and economic incentives for habitation in regions where other agricultural or non-agricultural enterprises would not be competitive. Moreover, they often provide employment for older, less active workers who are less well suited for non-agricultural employment in the best of times and certainly not in periods of chronic high employment.

Cereals :

Cereal production is not a major enterprise in the three Mediterranean regions of the Community, but it is of importance in each. Each of three regions is a net importer of cereals. Southern Italy is a major producer of durum wheat; Greece also is a surplus producer of durum wheat. Durum wheat is produced in Mediterranean France but the region processes much more than it produces.

There are three aspects of cereal marketing which can be looked upon as separate functions and which turn out in these situations to be generally handled by separate organizations. One aspect is the collection and storage of the cereals produced in the region. A second part is the processing of cereals produced in the region, and in some cases outside it. The third function is production and distribution of mixed feeds, using both local and imported materials.

The collection and storage of locally produced materials in these regions is performed primarily by cooperatives, which often are extensions of or affiliated with large regional or national cooperatives. These functions appear to be performed relatively efficiently, given the nature of production and in general their economic organization appears good.

As one moves to the processing of the locally produced cereals the role of cooperatives diminishes sharply. The production of flour, pasta and processing rice (in France) are handled largely by private firms which are national and sometimes international, in scope. At present the Italian industry has over-capacity. These firms generally seem to be relatively well organized and obviously have developed substantial abilities in national and international marketing in a highly competitive industry.

The picture regarding the production and distribution of animal feed is more of a mixed picture. It is done both by cooperatives and private firms. In Mediterranean France some of the enterprises which produce feeds have developed integrated animal feeding operations to provide a market for their products and appear to be doing relatively well via this process. This implies, however, that they have some expertise in the marketing and processing of animal products in the region since their feed costs are such that they are unlikely to enjoy a cost advantage.

The mixed feed industry in Italy and Greece suffers from lack of adequate size and the attendant inefficiencies and from some over-capacity. This in part results from the earlier development of small facilities to meet local needs and over investment as a result of anticipated growth in livestock production which did not occur.

The structure and relative efficiency of the cereals collection and processing industries raises some interesting questions regarding the reasons for the contrast with other agro-food industries in the region. A reasonable hypothesis would be that the collection and storage of cereals, unlike the

local processing of wine and olive oil, involves no price risk inasmuch as national government intervention in the pricing of cereals long predated the formation of the Common Market. Moreover, cereals are storable and more easily transportable than are grapes or olives, so there never was the strong incentive to have small, inefficient facilities in every community. In addition, the cereal products are easily sold on standard characteristics and product differentiation is not an issue at any level in the system. Finally, there are not great economies to scale in the collection and storage of cereals.

In contrast, cereal processing is an industry involving risk-taking, marketing skills and competition at the national and international level. This generally requires a large organization with ability to perform a number of these functions on a large scale. In the case of both pasta manufacturers in Southern Italy and France, and rice processors in France, it involves imports as well as the use of local products; thus, it is a relatively complex business involving multiple functions.

The future of the mixed feed industry is intimately tied to the production of meat and milk in these regions and, vice versa. Unless the feed costs can be reduced in these regions, the local producers of meat and milk will have increasing difficulty competing with other more efficiently organized areas in the Community. Conversely, unless the livestock and dairy industry can be developed along more efficient lines, the demand for an expanded mixed feed industry will be low. This runs directly into the conflict between the surplus production of meat and dairy products in the Community and the need to improve employment and income in these disadvantaged Mediterranean regions. There is no answer to the dilemma, but its existence needs to be recognized and taken into account in considering regional development policy.

## VII. SERVICES AND STRUCTURE

It is evident in each of the country studies that Community policy regarding assistance to the agro-food industry has become an important if not overriding factor in determining investment and expansion policy for many firms in the industry.

Over a wide range of firms and activities and products it appears that investment decisions are dependent upon the availability of community, national or regional subsidies or some combination thereof. There are several considerations that need to be addressed in this regard.

If, as it appears, that current and future investments are to be heavily influenced by Community policies this implies that those policies must be carefully designed and implemented so that it will contribute to sound and healthy agro-industry base which will provide increased employment and income to these regions. This issue will be discussed later.

A more fundamental question which might be raised is why are these regions so heavily dependent upon public sector investment aids to bring about reorganization and improvements? In many other places in the world and within the Community such direct aids are not a factor in bringing forth the necessary investment, yet in these regions they appear to be crucial.

One obvious reason is that the nature of agriculture in these regions is different and that the problems of small farms, lack of flexibility at the farm level in products to be produced means that it is not possible to organize agro-food industries in the same way that they are organized in other areas which have fewer agricultural constraints.

Another reason for the dependence upon public investment is that the level of profitability of most firms in the region is low and is prevented from increasing by the competition from lower cost, more efficient firms outside the region.

Another possible reason for the lack of adequate private investment in the agro-food industries in these regions is the inadequate level of supporting services in at least some of the regions. These include inadequate price reporting, grading, technical information, research, training in technology, marketing and management to mention a few. The absence of these services was mentioned frequently in the country reports, although it varies substantially from country to country and product to product. In any case, the absence of such services could be a major factor in inhibiting the efficiency and growth of existing firms and slowing the entry of new capital into the agro-industries of the region.

To the extent that the inadequate level of supporting services is a problem, it should be recognized that it will continue to be a problem for the operation of the agro-food industry in these regions even if there is a large continuing subsidy for the financing of new plants and equipment. This is one area where Community policy clearly should focus greater attention than is now the case.

A third and related reason for the absence of new investment in the absence of subsidies is the dominance of farmer cooperatives in some portions of the agro-food industries and the related issue of national policy favouring cooperatives over other forms of enterprise.

The general point made in all the country studies is that past and present policies have favoured cooperatives, especially in the matter of direct aids, credit subsidies, and access to credit through public or semi-public agencies. This fact has several implications for the present and future organization of the agro-food industry in the Mediterranean regions.

One fact is that private firms are unlikely to enter sectors where they know they will have to compete with subsidized competitors and where they have little or no chance of receiving equal access to the subsidies. This appears to be the case in some sectors in these regions.

Another implication of the dominance of cooperatives in many of the agro-food industries in the Mediterranean regions of the Community comes directly from the nature of many of the cooperatives and their history. Many of the cooperatives are local in nature and almost by definition are limited in function. This means that they are not equipped to provide integrated multiple-functioned services of the type required to compete successfully on the national or international scale. Because of their local nature and limited functions, they have limited ability to offer new personnel extensive career opportunities and experience and, thus, their recruiting of new management personnel is constricted both by the local control and influence of local boards and by the nature of the opportunities they can offer. Bright and aggressive young individuals appear more likely to move to cities and seek employment in positions which have greater potential since the fragmented local systems are unlikely to offer them.

In those cases where the country studies found cooperative groups which were integrated with large national or regional organizations it appeared that the activities they were engaged in were better organized in economic, managerial and technical terms than was the case with smaller independent cooperatives in the same areas.

In this regard the situation in the United States provides an interesting contrast. In the U.S. the large regional integrated cooperatives have become common and are some of the most innovative and aggressive firms in the agro-food industries. Some of them are nationally and internationally recognized for their marketing, processing and managerial skills.

They receive no special subsidies (their tax treatment is different) and they carry out no special functions for the government. However, in the U.S., as elsewhere, cooperatives have in most cases had difficulty in operating effectively in the export market. There are of course, some notable exceptions which come to mind, especially in the citrus field.

The relative lack of cooperatives which provide integrated functions over a major portion of the marketing chain results in a situation in many products and areas in the Mediterranean region of the Community in which the various functions either are poorly integrated and coordinated or that integration and coordination is carried on largely by supermarkets, wholesalers and international traders centered outside the regions. It is interesting to note that in some sectors, such as pasta manufacturing, this is not the case.

Given that support for cooperatives is a deep-seated and long-standing political policy within the member states the inherent limitations that these cooperatives have; and the likelihood that the policies favouring cooperatives will continue, it seems important that the approach to the problems under discussion be revised to take this situation into account.

The operation of Community aids policy was frequently commented on by agro-industry representatives. It was frequently mentioned that the policy of distributing aids to investment was slow, cumbersome and complex. Moreover, it appears that the technical requirements regarding the preparation of the documentation for such aids is such that it taxes the abilities of many of the smaller organizations which might be eligible and benefit from the aids.

There also were comments that the Commission officials which administer the investment aid programs in Brussels were far removed and had too little contact with and knowledge of local conditions and problems. All of this may well be true and unavoidable. It appears that the Community administrative structure is by conscious choice of the member states largely confined to Brussels and that national and regional authorities are primarily responsible for carrying out local and regional activities. If this is the case, then it is not surprising that local firms believe they are not well-linked to Brussels, for they are not intended to be. This is a political issue which makes policy development and administration more difficult but is likely to remain a fact for the foreseeable future.

This study is in no position to evaluate the Community system of administering aids or to suggest changes or improvements. It should be noted, however, that substantial number of persons in the industries being assisted have concerns about the present system as they see it. Given the possible rising involvement of the Commission in such activities special attention probably should be paid to the reduction of such concerns.

VIII. A STRATEGY FOR AGRO-FOOD INDUSTRIES DEVELOPMENT IN THE  
MEDITERRANEAN REGION OF THE COMMUNITIES

In considering a strategy for the development of the agro-food industry in the Mediterranean regions of the Community it is important to remember what the objective of the strategy is and some of the assumptions underlying it.

The primary objective of the strategy is to help bring about a rationalization of the agro-food industry in these regions with a view to making them efficient technically and economically competitive in terms of costs and functions, and fully integrated into the national and international markets within which they must operate.

Certain assumptions underlie the strategy that is outlined in the following pages. If some of these assumptions prove to be incorrect then some of the strategy which is outlined would need to be reassessed. One of the assumptions is that the agro-food industry in these regions will continue to be largely privately owned (including cooperatives) and that there will not be a large-scale development of public enterprises of the type found in steel, chemicals, banking and some other areas of economic activity. Thus, it is assumed that the major purpose of the strategy is to encourage and enable relatively small private firms to change and improve, not to replace them with public firms.

Second, it is assumed that both economically and politically a system of programs which encourages changes by positive rewards and incentives is more likely to be effective in bringing change than a system of penalties and rules.

Third, it is assumed that market forces alone will not be sufficient to bring about the desirable changes and rationalization of the agro-food industry. This implies that there must be a substantial public intervention to achieve the desired results, and that the major question is how can this intervention be structured to bring the greatest results with the fewest public resources.

It should be noted that these assumptions rule out the widespread establishment of national or multi-national public marketing agencies imposed by national or Community authorities as an attempt to rationalize the industries. Such agencies are one possible approach, but given the economic and political realities of the current and prospective situation, such organizations are unlikely to bring the desired results and probably would create more problems than they solved. On the other hand, none of these assumptions rule out the establishment of marketing orders or rules which might regulate size, quality and other marketing standards.

In addition to these assumptions, there are several general elements to the strategy which appear important. If many of them are deficient or absent it is likely that the strategy will not be successful.

One element is that the strategy must operate in a way which draws heavily upon private investment within the concerned countries, and, if possible, outside them. This is not intended to downplay the role of public investment, but merely reminds policy makers that there just is not likely to be enough public funds available to achieve what needs to be done in a reasonable period of time. This means that public expenditures must have as their focus the stimulation and encouragement of maximum private investment and associated public policies must be made with due consideration as to their effect on such private investment.

Second, the strategy must be developed based upon adequate knowledge of the system which is involved. This study advances that knowledge substantially but it falls far short of providing adequate information to carry out a complete strategy.

Third, the strategy must consider the entire system and encompass much more of the system than has apparently been the case to date. This study has not encompassed the entire system but it does throw light on how some other parts of the system affect those studied. One gets the impression that the past policies have tended to concentrate on single elements of the system, i.e. processing or storage and have not looked at the system, including the producing part of the system, as a related entity.

Finally, the strategy must be a Community strategy which fully takes into account the relationship between the three regions and the markets which they serve. At the same time, the strategy must give due consideration to the unique national and regional problems and characteristics. Because the markets for all of the products are local and national as well as Community-wide, the functioning of local and national markets will have to be improved as well as those of the international market.

Above all, it should be kept in mind what the overall objective of the strategy is. There is a clear and major need for a rationalization of the agro-food industries in the Mediterranean regions of the Community. The specific form of the rationalization varies from product to product and area to area but the general need is clear.

The rationalization must contain elements of cost reduction and the building in of capacity to undertake new and effective marketing functions. But, the cost reduction must be carried out in most cases without adding to the total capacity and the new functions must be developed among units which are not now well integrated and may not be integrated in the future in the usual sense of ownership, management and contracts.

A continued piecemeal approach will be expensive and may cause as many problems as are solved. Unless a broader approach can be followed, the result may be both continued economic distress and large sections of the agro-food industries which are not competitive in the market of the Community, let alone the world.



Agreement on the general elements of a strategy will be much easier to achieve than will the development and implementation of that strategy. It is in the implementation that possible tensions and conflicts between local and regional interests and Community policy arise.

The steps in the proposed strategy are outlined in greater detail in the following sections. However, it probably would be useful to briefly review the situation from which we start.

### A Review of the Situation

The situation in most of the major lines of activity has been outlined in the earlier sections of this report. This is merely to review and to pull together those results so that we have a focused starting point for the strategy to follow.

In general, the agro-food industries in these regions commonly have one or several characteristics. They are :

1. Firms are small. The majority of the firms in the agro-food industries in the regions are small to medium sized in terms of volume, capacity or other common measures of size. In many cases, they are too small to realize economies of scale and to carry out many marketing functions which might add value to their product.
2. Modern technology is missing. Many of the firms lack modern machinery and up-to-date technology. This raises their costs, reduces their ability to improve product quality and limits the markets they can compete in successfully.
3. Single-product and single-function firms predominate. Many of the firms process single products. This increases their costs by providing less use of their facilities and management personnel. It limits their product line and thus their ability to enter functions such as national and international marketing. In many cases the firms only engage in the primary or first processing and other firms outside the region perform the other functions and capture much of the value added.
4. Many firms do not have control over the product they receive. Many of the products in the region are products of tree fruits, vines, olives and citrus. What is produced is the result of producer decisions made years or decades earlier. Changing the variety and quality of product is a long, slow process. In many cases, local farming conditions limit the changes that can occur. Conversely, in some cases the absence of competitive agro-food industries inhibits greater diversity and changes in farm production. This appears to be the case in meat animals and dairy production where all of the Mediterranean regions are deficient relative to their own consumption.

5. Firms lack capital for modernization and expansion. Because most firms are small, not affiliated with larger enterprises, and often not very profitable, they cannot generate capital internally for expansion and modernization and they appear disadvantaged in or not related to national and international capital markets. Thus, expansion and modernization have become heavily dependent upon national or Community aids.
6. Overcapacity is common. In many of the lines of activity excess capacity exists relative to current and prospective output. This increases costs and increases incentives to process and market lower quality products, especially if processing payments are involved.
7. Cooperatives dominate. As a result of tradition and, in some cases, national policy, cooperatives are the dominant form of business organization in many areas and products. This increases the problems of consolidation and for a variety of reasons limits the functions which enterprises are willing and able to undertake.
8. Market integration is absent. Apart from a few product areas national or multinational firms seem largely absent from the scene. As a result, many firms lack knowledge of prices and conditions in national and international markets. Many firms are largely dependent upon brokers, chain-store buyers and firms outside the region for links to their markets.
9. Product quality creates market problems. Much of the wine produced in these regions is of a quality where the market is declining. The lack of standard qualities apparently limits the market for olive oil. The orange juice produced is not adequately competitive with imported sources. Some canned products are not of high enough quality to compete in consumer markets in northern member states. Some of the inadequate quality is due to production problems inherent in the region. Some of the quality problems are due to deficiencies in structure and facilities of the agro-food industries. Some of the quality problems come from reverse incentives arising from Community intervention programs which reduce or remove the premium for quality products which the market might provide.

This list of difficulties and disadvantages should not leave the impression that the situation does not have some vigorous elements. There are numerous firms which are healthy, innovative and profitable. In many cases they exist within branches of the industry where the normal situation is relatively unfavourable. In most cases the healthy firms do not dominate although in some lines this is the case.

### Components of a Strategy

A successful agro-industry strategy for the Mediterranean region involves at least six components. The appropriate mix between the components should vary from region to region and from product to product. It appears likely, however, that some of each of the components will be needed in all areas and all product lines. Substantial deficiencies in some of the components is likely to result in the other being only partially effective or ineffective.

The six components of a strategy are :

1. Improving structure of the agro-food industry. In this context the consideration of structure would be comprehensive and include physical facilities, modern plant and equipment, larger size firms and fewer firms.
2. Improving and broadening the functions performed by agro-food industries in the region. This study indicates that the agro-food industries need to develop more functions especially related to marketing and more sophisticated processing.
3. Improving product quality. In a large number of product lines the development and maintenance of quality is inadequate to compete in national and international markets.
4. Improving Product Utilization. More emphasis needs to be given to improved use of by-products, to new uses for agricultural products and to reduction of waste and spoilage. All would increase income and reduce costs in the system.
5. Improving market integration. The large number of small firms with limited functions has limited market integration. New ways are needed to achieve market integration among small firms and cooperatives.
6. Improving support services. At present the level of support services for the agro-food industry appears low. This deficiency becomes doubly important since the present and future structure of the industry will require more support services than might be the case if the agro-industry structure was different. In other words, large national and international firms require fewer public support services than do smaller, less well integrated firms.

Let us examine each of the components of this strategy in more detail and, equally important, the relationship between the components.

### Improving Structure

The structural problem of the agro-food industry has been best recognized and partially addressed in Community policy. The main policy has involved a series of capital grants to build new facilities. While this policy has been and will be important, it is probably neither fully adequate nor comprehensive enough to bring about the widespread structural reform needed.

There are three levels of physical structural change which need to be considered and addressed in any assistance policy. One is the replacement of obsolete or inadequate processing facilities with new facilities which produce the same product more efficiently and at lower cost. The second is the building of facilities which will produce a new product and/or perform new functions. The third is the upgrading of existing facilities to improve product quality, reduce costs or improve efficiency. An example of the first is the building of a new fruit or vegetable canning plants to replace an old one; an example of the second is the building of a freezing plant to produce a new line of frozen fruits or vegetables; an example of the third would be the addition of new machinery to improve materials handling or product storage for an existing plant. All of these are important. It appears that current policy has emphasized the first and paid less attention to the others. More attention needs to be given to facilities which produce new products and to improvement of existing facilities.

It should be remembered that structural reform involves more than the upgrading of physical facilities. It also involves changing the number of firms and plants and how they operate.

Structural reform implies that capital assistance take into account not only the situation of the individual firm requesting assistance but that the decisions for assistance be within the context of the total industry situation. Capital grants might consider not only the modernization of facilities but also ways to consolidate and enlarge. If properly devised, policies encourage joint ownership and operation of certain facilities where such joint activities could replace several smaller and obsolete facilities and add appreciably to efficiency. As matters now stand, new facilities may add to the general over-capacity problem already existing.

Capital grants are very popular with those who receive them and are resented by those who are excluded for one reason or another. In any case, even with large increases in budget expenditures for capital grants, the funds available for these purposes is not likely to be sufficient to meet the very large investment needs involved in restructuring. Therefore, additional methods of encouraging new private investment for restructuring of the agro-food industries needs to be developed.

Two approaches that might be considered are loan guarantees and interest rate subsidies. Both have been used in other contexts and have proven successful in encouraging private capital to enter areas where normal market forces have resulted in capital shortages.

The country studies clearly highlighted the fact that agro-food industries' investment is heavily influenced by the availability of national or Community aids to investment. Even though it is desirable and necessary to achieve greater private investment (including by cooperatives) in these agro-food industries, it is clear that the nature of and criteria for public aids will be an important factor in future investment.

Several facts are found in the country studies. One is that there still is substantial need for the upgrading and/or building of new physical facilities in many agro-food industries in these regions. In many cases, the facilities are antiquated and the technologies are obsolete. Therefore, any policy which limits or prohibits new facilities on the basis of excess capacity in the total industry or excess supplies of the product is going to ignore many of the real problems of the industries and the regions. On the other hand, policies which indiscriminately add to physical facilities without regard to regional and Community needs also will create lasting problems.

Community capital assistance needs to be given with the clear objective of improving the rationalization of the industry. This implies that decisions regarding investment need to be taken in a broader context than may have been the case in the past.

This leads back to the comments regarding the need to look at the system as a whole and to provide assistance where firms and facilities will be part of a modern, healthy system. It should be remembered that local managers of individual firms and cooperatives do not think in terms of systems and the engineers and suppliers of plant and equipment who plan and sell also do not think in terms of the system outside the physical facilities they deal with. Therefore, the Commission should look forward to the development and implementation of a broad systems approach in determining priorities for its future capital aids to the agro-food industries.

A note of caution is in order in this regard. At present it is likely that the ability of local managers, regional officials and possibly even national officials to deal with this broader approach is limited. To impose such criteria upon an already cumbersome procedure without adequate development and education as to its meaning might create serious problems. This, however, does not reduce the need for or importance of the issue, but merely implies that careful thought should be given to its implementation.

One approach might be to choose a single product or group of products to work through the approach and the criteria. One such product is the system of production, processing and distribution of cheeses, a product where the market is strong and the need for new organization and facilities is clear if the industry is to thrive and grow.

There is a special need for the restructuring component to be related to the component relating to the development and strengthening of functions such as more sophisticated processing and marketing functions. This suggests that in

considering restructuring the Commission should give attention to whether the new structure also can be of assistance developing marketing facilities and competence as compared to merely improving processing facilities. It appears that the emphasis in past capital assistance has been largely or entirely upon the improvement of physical structures and improving technology. While these both are important, a more efficient local processing facilities may have only a marginal effect upon the income of the farmers who sell to it if there are no clear plans as to how the product of the new facility can be marketed more effectively after they are produced.

One approach might be to require a marketing plan as an integral part of a proposal to build a new processing facility or upgrade an existing one. Here again the problem of local expertise to develop a marketing plan may create serious problems. Moreover, in many cases the need is more for joint marketing plans and institutions which function for several small firms and products rather than individual plans for specific facilities.

A second related issue is that of product quality. Another criteria which might be considered in capital assistance programs is whether the new facilities can contribute to improvement of product quality in wines, in fruit and vegetable processing and in meat and milk processing. If improved product quality is not now a criteria used in capital grant programs it should be added.

Thus, any capital assistance program should have multiple objectives. It should contribute to 1) restructuring, 2) encourage additional functions and 3) improve product quality. Even though the addition of criteria beyond those already used may add to the complications that some already feel are too great, unless the criteria are broadened the opportunity to achieve real progress will be lost.

#### Improving and Broadening Functions Performed By Agro-Food Industries

One of the major deficiencies which runs through most of the agro-food industries in these regions is the limited functions they can perform. The limitations are especially evident in the area of product marketing in national and international markets.

Part of the deficiencies are due to the small size and fragmentation of the agro-food industry structure. Part is due to the limits inherent in the large role that local cooperatives play in initial product processing. In any case it is unlikely that the structure and ownership of these enterprises will change enough to solve these problems. Therefore, an important element in the strategy must be the development of new forms of organization to overcome these deficiencies.

Here, perhaps more than in any other area, the role of the Commission and its willingness and ability to innovate can make an important difference. The Commission as part of its strategy should initiate a program which encourages the development of new types of organizations which perform new and broader functions for a group of the firms (and/or coops) now unable to perform them. There is at least a small precedent in Community support for farmers' associations.

No solid model exists for such activities and therefore the emphasis should be upon experimentation and innovation. The Commission should consider grants, operating subsidies, salary subsidies and other assistance to groups of firms which join together in developing new organizations for all aspects of improved marketing on behalf of the participating firms.

The mandate of such new organizations should be viewed widely. They should be encouraged to develop national and international marketing expertise, do product specific marketing research in relevant markets, advise firms on quality control issues relevant to markets, engage in new product development and engage in management advising for members. Not all organizations need to do all of these things but they should be allowed and encouraged to develop broad and innovative programs as needed.

The key to success in this area will be the ability of any new organizations to attract and hold competent, experienced personnel in these areas and to equip these personnel with the operating funds and modern technology to do the job. Initially it would be expected that substantial subsidies from the Community might be required to initiate such institutions. If, however, successful models can be developed which show it is possible to increase the earnings of participating firms the willingness of firms to invest their own funds will increase.

Initially, it would not appear wise to have the capital assistance designed to encourage restructuring tied to participation in one of these proposed new organizations. The first task is to develop a new type of functioning organization which performs new and complex marketing functions efficiently. When this has been achieved, an association with such an organization could then be considered as a possible criteria for investment strategy.

The importance of creativity and flexibility in this building process cannot be over emphasized. The organizational needs and functional gaps to be filled vary by product, by region and by type of firm to be involved. Different organizations and functions are needed to market wine than canned fruits and different functions are needed to successfully compete in national markets, Community markets and third country markets. Early attempts to prescribe and limit functions or to impose uniformity upon what must be diverse organizations will almost guarantee limited success or failure.

### Improving Product Quality

The problem of both quality level and lack of uniformity in product quality appears to be widespread problem in improving the marketability of many of the products of the agro-food industry in the Mediterranean regions of the Community. Part of the product quality problem is related to the growing conditions in these regions. Part of it is due to inadequate processing and marketing facilities which reduce or limit the product quality.

There are three elements to the quality problem. One aspect is that relationships between product quality price and consumer demand need to be better understood. A second aspect is that current Community programs which reduce incentives to produce quality products should be reexamined with a view to changing these effects. Third, whenever possible, policies and programs which reward quality at all levels of production, processing and marketing should be emphasized.

Producers, processors and marketing firms in the Mediterranean region should not lose sight of the fact that their major market and the market where they must compete successfully both nationally, in Northern member states and in third countries is largely a wealthy discriminating market which has quality standards and can afford to pay for them. Much of the decline in markets for low quality wine is because more people can afford better wine and buy it. The major growth market for Mediterranean products is not among the poor at home or abroad. In any case, the region's cost structure is such that it cannot compete on price alone with many areas of the world.

One important factor in improving quality is the ability to develop definable grades and standards for products. Grades and standards are unneeded when the ultimate consumer can examine the product personally in a local market regularly. When, however, products are being bought and sold over long distances, from different suppliers and to different buyers, the ability to describe and define product quality becomes more important. The lack of ability to do this for many products produced in different areas and competing in part in the same markets clearly results in either high cost, low producers prices or both.

Most of the products discussed in the country studies face multiple markets - local, national and international. Moreover, in many cases the fresh product and the processed product often compete. It is worth noting that in fruit and vegetable processing the processor and often the buyer for the retailers specify product quality and size in advance.

The lack of adequate quality standards was mentioned frequently in the country studies in a variety of contexts. It is clearly an issue in Community diversion programs where lack of quality differentiation probably over-rewards poor quality and thus encourages the continual production of low quality products.



The various member countries have product quality standards which have been developed for local national markets. They are not, however, standard between countries and thus do not serve as an adequate basis for modern international trade.

It should be remembered that the purpose of grades and standards is to relate product characteristics to consumer demand and to serve as a basis for trade which aimed at meeting consumer demand. It may be that some standards developed earlier are no longer relevant and that new ones are needed.

It is recommended that the Commission take the leadership in the development of grades and standards which could improve the functioning of trade in these products.

Undoubtedly there already are numerous studies and recommendations related to grades and standards for these products and many efforts already made to improve the situation. The establishment and acceptance of such grades is a major problem. Yet, the absence of such grades, at least for products moving in international trade, clearly inhibits the use of modern communications and buying and selling methods. Moreover, there is evidence that lack of adequate grading systems causes the intervention programs to work ineffectively and in ways which were not intended.

The second major emphasis should be on removing present disincentives to improved quality from current policy. As long as intervention programs, processor payments and other programs operate without regard to quality these programs reduce the monetary incentives for producers and processors to improve quality. The Commission should systematically review its various programs for these products in view of the program impact upon quality. It is not sound practice to advise producers to produce quality products and to pay them to do otherwise, which now appears to be the case.

The third aspect of the quality program should be to reward the production of higher quality products. To a large extent the market should do this if intervention programs and similar devices do not distort the situation. In addition, however, programs could and should be devised which would reinforce the market premium for better quality products. Processing payments, for instance, could be based upon market price of the product sold rather than upon volume. There are a variety of ways to build quality premiums into public programs. Welfare programs make income transfers according to need. Programs designed to transform the agro-food industry should be based upon performance and the improvement of product quality should be a major performance criterion. At present this does not appear to be the case. Moreover, programs which concentrate solely upon the improvement of structure and function for low to ordinary quality products are unlikely to solve the problems that exist.

### Improving Product Utilization

There are three aspects of this problem which deserve attention. One is the development of new uses for these agricultural products which will broaden the market for them. A second feature is the reduction of waste and spoilage in the system which essentially is a cost-reducing element. A third important aspect is the development of the more effective use of by-products.

A development of new uses for these products requires basic research, possible investment in new plants and equipment and the development of new marketing channels and expertise. The structure of the firms in the Mediterranean region effectively precludes their doing either the basic research or the development of new marketing channels for new products. Recommendations on ways to encourage and expand these two separate but related functions are included in other parts of the strategy. Since, however, success in this area requires research as a first step, it should get priority initially. Concerns about new marketing channels and techniques only become relevant when new products are technically possible and appear economically feasible.

The extent to which excessive and unnecessary waste and spoilage increase marketing costs and reduce product value is often underestimated. It can result from farm production practices, inadequate physical facilities, poor handling and processing techniques or a combination of all three. Losses of product and deterioration of product quality were mentioned in the country studies as serious problems in both the marketing of fresh and processed products.

Any strategy to deal with this aspect of the problem will consist of several small steps rather than sweeping changes. First, problem identification must be improved, probably through the development of some kind of marketing advisory service as discussed later. Second, applied food technology research which is readily available to small firms must be developed. Finally, programs directly related to increasing investment in waste and spoilage reducing facilities can be undertaken. It should be noted in this regard that in many cases the addition of modest investments to existing facilities may have a greater cost-reducing effect per unit of expenditure than will investing in new labor-saving high technology plant and equipment.

The third element in this component of the strategy is making more effective use of by-products, for many of which markets exist. One of the more obvious of these cases is the use of by-products of the citrus processing industry. In Brazil and the United States citrus pulp is dried, pelletized and sold for animal feed, with much of it going to the EC. Yet in the Community this same by-product presents a waste disposal problem. The development of the full use of this by-product could both increase the value of the citrus and provide additional animal feed in feed-deficit regions.

Apparently much the same situation exists in meat slaughter and processing plants. In large and efficient slaughter and processing plants they

"use everything but the squeal", but the small and inefficient plants, which are common in the Mediterranean regions, often do not make efficient uses of by-products. Improvement of the use of by-products from these plants could both increase farmer revenue and reduce waste disposal problems.

In these cases and many others, the technology is known and the markets for the by-products exist. In these situations it becomes a matter of investment priorities, a matter which the Commission can encourage. It appears that making more effective use of by-products should receive greater attention in Commission priorities for investment aids. In some products, at least, these investments can have quick results in terms of improving producers and processors incomes.

In some other products, the development of fuller use of by-products will be dependent upon research and the development of new markets. As in the development of other new uses, a substantial investment in research probably is the necessary starting point.

#### Improving Supporting Services

Both the nature of the firms in the agro-food industries and in the problems they face indicate the structure of services now available to support these firms is inadequate to develop and sustain a strong prosperous industry. The heavy concentration of small and medium sized firms, many cooperatives, and lack of substantial integration all make the provision of adequate services more difficult than would be the case in large integrated firms. The range of services involved is broad and their deficiencies vary greatly from region to region and product to product. Some of these services usually are performed by the public sector. The provision of such services normally is left to national or regional authorities, but in this situation there appears to be a strong reason for the Commission to play a strong positive leadership role in bringing about change and improvement.

The provision of such services often receives low priority for funding. The results are diffuse and difficult to measure. Yet in the absence of an adequate level of such services most of the other measures will be ineffective and unsustainable.

#### Research :

One of the services is research. This study did not attempt to inventory the current research efforts relating to the agro-food industries, but the country studies suggested substantial deficiencies. There are several research areas which probably need strengthening. One is in the area generally termed food technology. It typically covers a wide range of subjects from engineering to microbiology, but with a strong and continued emphasis upon the practical problem of product improvement, process improvement and cost reduction.

This research often is done by private firms if they are large enough and prosperous enough. However, given the high proportion of small firms and farmer cooperatives in the agro-food industries of this region, it is not realistic to assume that these firms can and will do research.

Another research area that appears to be lacking is marketing research. This is not the same as economic research about markets and prices, which also may be lacking in many cases. Marketing research, especially relating to international markets, is sophisticated and expensive and generally requires ongoing efforts. It is generally done by private firms and is product specific to the firm's products. However, small firms lack the money and expertise to carry it out and, thus, it is rarely done by or for them. In the absence of good marketing research, how do small firms and cooperatives or groups of cooperatives know how to package and sell to maximize the value-added produced? Trial and error is an expensive and possibly fatal method for many firms. What is needed is a new type of marketing research effort done on behalf of small firms and at least partially funded by Community funds. The Commission should consider developing a system whereby funding could be provided on a multi-year basis for marketing research activities jointly developed by and for groups of firms and/or cooperatives which produced similar products. For instance, wineries, olive oil processors, or producers and goat cheese might reasonably be seen as a group. Sometimes the groups probably should involve more than one of the three regions.

Demand and price research related to fundamental longer-run trends also is much needed and probably deficient. The world is full of examples of bad investments made or encouraged by intelligent, well-intentioned people who made long-run decisions based upon short-run information. Some such errors are inevitable, but they can be reduced by adequate, good quality research on demand and prices. Again, this study made no effort to discover what the current situation is in this regard, but it probably is insufficient. Such research usually is done both by research institutes and private firms and increasing the support in public research institutes probably could solve the problem.

Another research area of importance which probably is insufficient is new product research. Such research is common among large integrated food processing firms and is rarely found in small firms and cooperatives, especially those with a single-product focus. Moreover, it is unusual to find new product research in universities and research institutes because it involves a number of disciplines or focuses which are normally separated in traditional academic research organizations. If, however, new product research is confined to large national or multinational firms, they will be the main beneficiaries of any market expansion and value-added gained from the development of new products. There is a need to carry the new product research back to the farm level because some of the changes may need to occur at the farm level.

As indicated, this study did not include a survey of evaluation of the research now under way in these regions. Given the clear lack of such research in some cases and its importance to the firms in the regions, it would appear that substantial emphasis should be given to improving support for such research. Moreover, since the products involved are often similar and competing, here is a clear case where many research results could benefit all of the regions and would be shared among them.

The obvious starting point for this effort is a thorough inventory and review of the current situation in regard to the appropriate research. For a variety of reasons it would be best to have such a review done by a multi-national team including individuals from the private sector as well as from universities and research intitutes. Recommendations cannot be made as to how to strengthen this service and where the priorities should lie until the current situation is better known. However, given the situation in the agro-food industries there is a major need for the Commission to take the initiative in strengthening research services aimed at serving small agro-food firms and cooperatives on a continuing basis. It is recommended that the Commission develop a new program which could directly fund such efforts aimed at these problems.

#### Training Programs :

There are two types of training programs which need to be considered. One is the formal training of managers and technical persons. It is generally provided by universities or similar degree-granting institutions. Another type is training programs for persons who already are managers or technicians and who would benefit from additional training relating to their specific jobs.

This study did not examine the availability or quality of formal training in subjects relevant to the training of managers of these types of firms. However; the Greek study mentioned the absence of in-country training in some fields which might be useful. In any event, such formal training exists both within some of the member states and outside, so the question is more how it can be encouraged and financed. One possibility which should be considered is the development of a scholarship program, perhaps funded by the Commission, which would finance some specialized education for individuals from these Mediterranean regions and who expect to work there in some type of agro-food industry. This might help offset the advantages that other regions may have in attracting and holding well trained individuals.

A greater challenge is to provide "on the job" training in specialized management and marketing skills for individuals in small firms who cannot leave their positions but who need certain skills to better perform their technical and management functions. In this area the possibilities available through new computer-assisted technologies are immense and the Commission should consider the making of grants to public or private institutions for the development and application of such training programs for use throughout the region. This kind of service is crucial to the development of managerial and

technical capability in small firms and cooperatives which cannot afford to develop and distribute such training materials. Given the fact that the agro-industries in these regions are, and probably will continue to be, dominated by cooperatives and/or small firms, there appears no alternative to some additional public expenditure on training activities to offset the considerable disadvantage these smaller units face in the situation in which they are operating. Directive 161 now provides for the training of managers of cooperatives, thus it might be useful to review the direction of those programs and to consider broadening them.

One of the training and information services needed by these firms is information and assistance about how to take advantage of present and future Community and regional assistance to be directed to such enterprises. It was mentioned in the country studies that the forms and processes for applying for capital assistance were so complex that many firms felt unable to benefit from the programs. When this situation exists, one of two things happens. Either the larger, better staffed organizations gain an advantage in the receipt of aids, or the process becomes largely a political process whereby the funds are allocated on a political rather than a technical or economic basis. Neither outcome is likely to produce the desired long-term results in the regions and industries concerned.

#### Advisory Services :

It has been widely recognized that one of the supporting services needed in these regions to improve the structural situation and technical and managerial level in farm production is the development of a vigorous farm advisory service. The Community is already financing the development of such an advisory service in Italy and is considering funding programs for some other areas of the Mediterranean region.

Given the nature of the agro-industry firms in the regions and their problems, a major emphasis should be on developing a new advisory service for the agro-industries in the region. Here again the Commission could, for a relatively small amount of money, take the initiative in bringing about changes which can have a significant effect upon the structure and performance of the agro-food industry over time.

The role and mission of an agro-food industry advisory service in these regions is new, different and substantially more complex than is the case with traditional farm advisory services. Thus, it is unlikely that traditional advisory services rooted in traditional farm-production oriented Ministries of Agriculture will develop the innovative advisory services needed to help the agro-food industries meet the problems they face. New types of people, new approaches and new methods of providing advisory services are needed to do the job.

The Commission should take the leadership in providing funds and innovative approaches for the development of a new agro-food industry advisory service.

The Commission should strongly consider the possibility of inviting private firms and institutions as well as public bodies to develop advisory services to meet the special needs of these industries.

One important point needs to be made regarding this effort. A new advisory service cannot be developed and be made effective overnight. Any Commission efforts in this regard should be regarded as a commitment for at least five and probably ten years.

The potential for innovation in this area is great. New developments in computer-assisted technology for information and teaching programs offer great advances over traditional advisory service methods. The Commission should make every effort to not only build new advisory services but also to take advantage of the substantial possibilities that now exist to make these new services more effective and less costly.

#### Improving Market Integration

There are several facets involved in this element of the strategy. One facet is to insure that information about the markets (current and prospective) is widely shared and understood. A second facet is that firms must have the ability to respond to such information.

Let us consider an example. An expanding market apparently exists for certain types of orange juice in the Northern member states. At present, producers of orange juice in the Mediterranean regions probably do not have good information on the nature of that market. Equally important, if, as it appears, the juice they produce is of the wrong quality and their processing costs are too high to be competitive, and they have no international marketing capability, they cannot act upon any improved knowledge of the market. Thus, one sees the ties between the elements of the strategy.

The improvement of the ability of firms to act upon more and better market information must come largely from the measures included in other elements of the strategy. Unless and until those other elements are working, improved information alone will not bring much change. Conversely, however, other changes without improved market information also will not achieve market integration.

It should be remembered that in dealing with the agro-food industries in the three Mediterranean regions, you are dealing with firms which operate in three different but interrelated markets.

For instance, in the market for meat animals, fluid milk, animal feed and some other products are local markets. The requirements for firms to compete in these local markets are different than are the requirements of firms which must

operate in national or international markets. This does not mean that firms operating in these fields are in less need of assistance; it merely means that the assistance they need may be different than for firms which operate in larger national and international markets. Moreover, when the concept of market integration is considered for these firms, the market which needs to be considered is different and the integration will require less complex programs to achieve it.

When the concept of differentiating on the basis of markets is used some other problems also are lessened. Even though the Community has a substantial surplus of milk, meat and cereals, an improvement in the facilities and systems relating to the production of these items can improve local farm incomes without adding to the Community's overall surplus problem. It also should be remembered that in cases where the markets are local markets, the value-added automatically remains in the region and the costs of producing the value-added are merely reduced.

On the other side, a clear recognition that for many products and firms the market is clearly an international market also clarifies certain issues. As discussed elsewhere, the information needs, marketing skills and other needs of firms dealing in international markets are quite different than those dealing only in local markets. It appears that it is in this area where the absence of integration is most visible and most important.

The issue of efficiently performing functions to improve value-added and how to organize to do this is different for firms in the international markets. For instance, one group of firms needs only to know prices, quantities and qualities available in local markets and about local consumer demand. Firms operating in international markets from any of the three regions have need to know prices in Germany and the U.K., and the availability of supplies from the other regions and the rest of the world. The issues of grades and standards which can be used in transactions is much more important in international markets than in local or even national markets. The need for many types of training also is related to the type of markets faced by the managers of firms, as is the issue of how and where the training could best be developed and operated.

Finally, it is likely that the Community's responsibility for market stabilization and disposal of excess supplies would benefit from examination of the significance of the differential markets for many of the products and even in some cases for different qualities of the same product. Some questions to be considered include the matter of the extent to which current programs reduce or remove incentives for firms to adapt to international standards even though the products they produce clearly far exceed local market demands. Conversely, are there situations where Community programs have been developed to problems which have their origin in products with local markets, but which in their applications have inadvertently affected the position of firms operating in international markets?



This study has made a significant step in terms of laying out some of the differences in the markets faced by product and location of firms, as well as understanding the substantial differences in current structures, operating methods and problems of different farms. The full use of this information, together with the accumulation of additional information, could make a substantial difference in the ability of the Community programs to provide significant and lasting assistance to the agro-food industries in the Mediterranean regions of the Community.

#### Market Information Services :

Probably the greatest impact that the Community program could have in this regard is in improving market information. It is clear that successful marketing is heavily dependent upon adequate information and that one of the most unequal aspects of marketing power arises from the fact that the different parties have access to more or less information.

The most basic information relates to current prices for specific products. Closely associated is good information about qualities of products, quantities available in different locations, etc.

The country studies almost all refer to the fact that prices for various products were determined by "the market", by the "middlemen" or by "the supermarket buyers". The studies report that prices were low because of competition from "the Italians", "the Greeks" or "imports".

None of the country studies actually pinned down the nature and sources of the information the persons in the regions used as their basis for their production and marketing decisions. It is likely, however, that much of the information was not based upon a widespread or sophisticated reporting system. In at least one case it was reported that prices in nearby physical markets were used to price products sold elsewhere, even though the small volume of the physical market may not accurately reflect "supply and demand".

Oddly enough, in the United States and presumably elsewhere, farm producers often are suspicious of price reporting and other market reporting activities. Yet, farmers and their cooperatives are the most disadvantaged vis-a-vis large scale firms in the absence of good market information. Despite this concern which might occur in this situation, it appears that the development of an extensive market reporting system would have a significant positive effect upon the agro-industries in these regions.

It should be recognized that large integrated buying firms probably already have substantial information for their internal use. However, in these volatile markets which are typical of many Mediterranean products, even with Community intervention programs, full transparency in various levels of the market would be of benefit. The Commission should consider the development and implementation of a price reporting system building up and expanding whatever national systems exist. It should be noted that the need is not only

for a better system but also one which is readily available and accessible to member firms in all of the regions. Technology now exists to make this possible at a relatively low cost. Since, however, much of what must be done lies outside the boundaries of member states when the problem exists, only active Commission intervention can deal with the problem.

### Viewing the Strategy as a Whole

This study has tried to develop the need for a strategy, the basis of a strategy and the minimal elements needed for such a strategy to be effective. Some elements of the strategy are merely continuations of current policies with suggestions for relatively minor change and improvements. Some elements of the strategy involve changes in current intervention policies which may be politically difficult. Some elements of the strategy involve the development of new and innovative approaches to deal with structural problems which are widespread and difficult.

While continuing the traditional approaches to the problems may be easier and more comfortable, it is the firm conclusion of this study that merely doing slightly more of what has been done in the past will not prove sufficient to deal effectively with the problems which exist. Unless and until the strategy is made more comprehensive and innovative, much of the money being spent on traditional approaches will turn out to be less effective in achieving change than is expected.

In a time of budget austerity there is a natural tendency to resist the initiation of new programs, especially if they are viewed as somewhat experimental in nature. In this case it would be well to remember the rather substantial budget expenditures now being made for Mediterranean products and recognize that if only a fraction of these expenditures could be saved by the development of some of the new elements of this strategy, investment in new programs would be returned many times.

### Carrying out the Strategy

This report has outlined the elements of a comprehensive strategy to bring out major changes in the agro-food industry in the Mediterranean regions of the Community. If this strategy is adopted then the question must be addressed as to whether the Commission is adequately equipped to initiate and carry out such a strategy. At least two areas need to be examined in this regard.

Improving the Information Base Regarding the  
Agro-Food Industries

The very fact that this study and at least three others have been commissioned recently by the Commission illustrates the great and continuing need for more and better information regarding the agro-food industries in each of the Mediterranean regions as a solid basis for policy. Much of the base data included in the country studies is based upon secondary national and regional statistics collected at different times and for different purposes by national institutions and research workers. What is needed is different and better information, collected more rapidly and developed and collected on a uniform basis using uniform definitions across the three regions.

A policy that aims at rationalization must have as its basis a reasonably detailed knowledge of the structure and performance of the agro-food industry and how it is changing on a comparable basis for all of the industries and regions involved. This does not now exist nor does a system to put it into existence. What presently exists measures structure inadequately and does not measure performance at all.

There is no reason that this information needs to be a complete census and there are many reasons it should not be. A sample survey, using modern scientific sampling methods, can produce information with quite acceptable levels of accuracy and a fraction of the cost of a census.

There are several reasons that the information should not be tied to a census. First, a census is an official national matter whose parts and definitions must be internally consistent and serve national purposes. To attempt to develop official national definitions and questions across three member countries would be difficult, time consuming and in the end would result in a series of compromises.

Second, a census is almost by definition a function of governments, and their planning horizon and ability to act rapidly is limited. Moreover, since many governments might use information from individual firms for tax and control purposes, the ability to obtain certain information quickly and accurately probably would be enhanced by having the sample survey done outside the government.

Therefore, it is recommended that the Commission fund and initiate a sample survey of the agro-industries in the Mediterranean region with provision for a periodic updating or follow-up. It is recommended that a private (non-governmental) organization, operating under supervision of the Commission, be engaged to collect and provide the data to the Commission. Of course, there would have to be the appropriate safeguards regarding the confidentiality of the data on individual firms, but this could easily be ensured.

The type of information that needs to be gathered in many ways parallels the information sought and obtained in these country studies. This includes the number, size, physical and economic characteristics, labor force, functions performed, etc. of the operating agro-food industries. The entire planning and operation of the sample should be done with the aim of providing for the easy and quick storage and use of the data on a modern computer system.

This small study has illustrated both the substantial possible gains to be obtained from such information and the great importance of standardized definitions and information gathering techniques. Individuals used to working with agricultural matters tend to forget how much better their understanding is of the economic and physical conditions of firms involved in agricultural production than their knowledge of the agro-food industries associated with agriculture. In agriculture the data base of census and other information goes back decades, and sometimes centuries and this information is crucial to the development and operation of any agricultural policy. An adequate data and information base is equally important in the development of an agro-food industries policy and such a base does not now exist. Whereas great progress has been made in standardization of terms and information needed between member states in agriculture, no such progress is apparent in the agro-food industries. Given the probably increasing involvement of the Community in the agro-food industries, both as a regional development issue and as an agricultural issue, means that such information will be sorely needed.

#### Organizing for Regional Strategies

The second question the Commission should consider is how to organize itself and the target regions for the planning and implementation of a comprehensive strategy for the development of the agro-industries in the Mediterranean region.

Apparently the practice has been in such programs for the major planning responsibility to rest with member governments and the regions involved within a set of general regulations and guidelines developed by the Commission. This approach has much to commend it, but it may not be adequate to get the task accomplished in this situation.

In the first place the general strategy must be translated into a specific strategy for each region and each product line (citrus, wine, etc.). However, what goes on in each region affects the others, and thus there is a real need for inter-regional and inter-product coordination. In addition, each region has much to learn from others in terms of both successes and failures. Moreover, given the general lack of organization and coordination within these regions and between them in the agro-food sector, there is little reason to believe there is a significant reservoir of local talent to plan, develop and implement comprehensive and innovative programs.

How to find this talent, how to develop it where it does not exist and the role of the Commission in this activity deserve thought. This report has no specific recommendation in this regard. It is an issue which involves both technical and political questions. It is an important issue, however, and one which will not disappear.

### Summary and Conclusions

This report summarizes the results of four substantial country reports together with significant information from outside sources and recommends the elements of a strategy to deal with the substantial problems of the agro-food industry in the Mediterranean regions of the Community. Translating such a strategy into functional operating policies and programs will be a long process involving many efforts on many fronts.

The task to be accomplished is large. The present situation is the result of a long history and in most cases the improvements will be slow. Market forces alone are not likely to produce improvement at a rapid enough pace to avoid increasing political pressures for larger and larger income transfer payments. Thus, the case for significant and continuing Community intervention is strong. However, market forces cannot be ignored and avoided and, therefore the strategy that is recommended is one designed to ease the pressures, increase the pace of restructuring and growth and to make these regions more competitive and more prosperous.

Even though the task is large it can be done. It is the conclusion of this study that money spent in the implementation of the comprehensive strategy would substantially reduce the future expenditures on programs for intervention, processor payments and similar activities. Equally important, this program can be a major step in the achievement of the goal of improving employment and income in these regions of the Community.



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