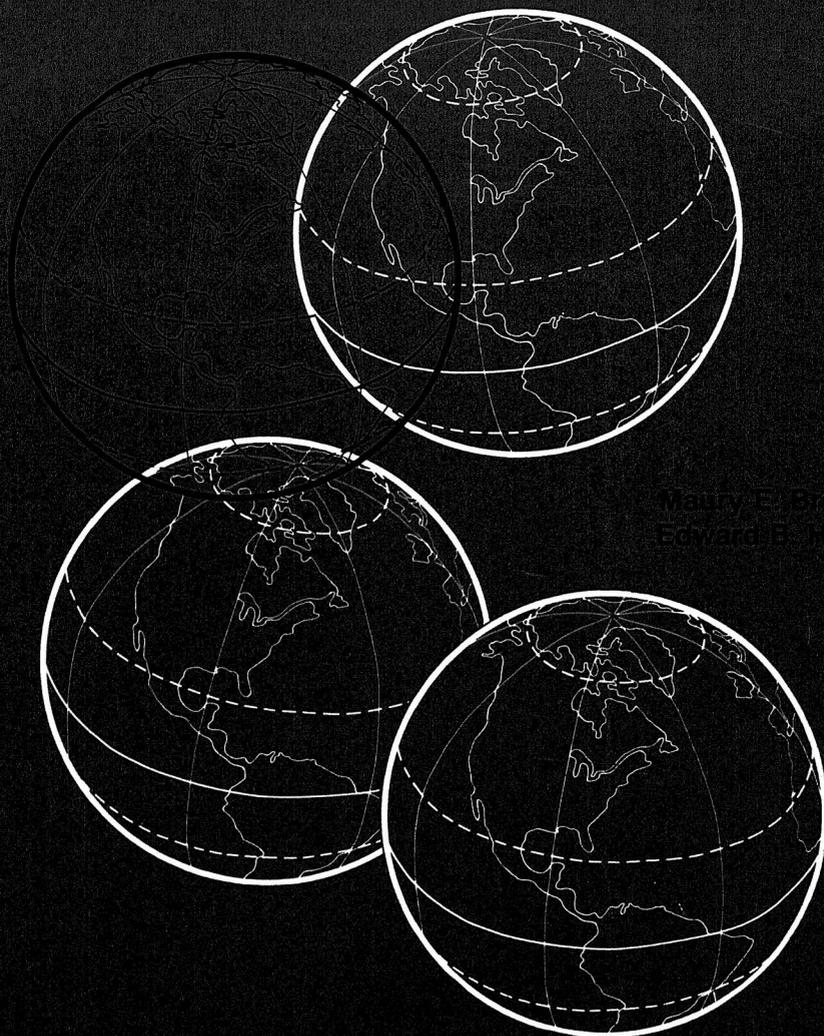


# The Common Agricultural Policy, Macroeconomic Forces and Horticultural Trade



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THE COMMON AGRICULTURAL POLICY,  
MACROECONOMIC FORCES AND  
HORTICULTURAL TRADE

by

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## Preface

This report was prepared with the support of the AID Agricultural Policy Project in cooperation with the Near East Horticultural Export Marketing Study. The cooperation is based on the need to analyze agricultural trade and domestic policies of potential importers of horticultural products. The intent is to determine the impact of these policies on growth of import demand. The linkage is also based on the need to determine the impact of macroeconomic policies and macro prices -- exchange rates, interest and wage rates -- on the ability of the study countries -- Egypt, Jordan and Morocco -- to compete in international markets.

This report addresses the first linkage -- that of importers' policies and import demand. A companion report entitled "Macroeconomic Policy and Agricultural Trade: Concepts and Case Studies of Egypt, Morocco and Jordan" addresses the linkage of macroeconomic forces and policies with the ability to compete in international horticultural markets.

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The input of Michael V. Martin and Ludwig Eisgruber is gratefully acknowledged.

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## Macroeconomic Forces and the CAP

The principal impact of macroeconomic forces has been through exchange rate adjustments in response to differential rates of inflation. Differing rates of inflation, in turn, result from differing monetary and fiscal policy.

The exchange rate influences the domestic floor price and minimum import prices because the Community prices are quoted in an artificial currency -- the European Currency Unit (ECU) -- and must be converted into the currency of member countries. If the currency of a member country appreciates, the floor price will fall, as fewer units of the currency are needed to purchase an ECU and vice versa. To prevent the decline in producer prices, an artificial exchange rate -- called the green rate of exchange -- is used. Because using the current exchange rates for transactions and artificial ones for setting policies would induce trade flows, the Community developed the Monetary Compensation Amounts (MCA), a system of trade taxes and subsidies to prevent these flows.

The MCA system keeps producer and consumer prices high in strong currency countries (e.g., Germany) and low in weak currency countries (e.g., France and Italy). Hence, production is encouraged and consumption is discouraged in strong currency countries. The opposite holds true in weak currency countries.

The effect on horticultural products is indirect, because MCAs have not been applied directly to these products. But, because the prices of other products are affected, consumption and production of horticultural products are affected. Consumption would be encouraged and production discouraged in strong currency countries. The opposite holds for weak currency countries.

## The CAP for Horticultural Products

The Community is the world's largest importer of fresh and processed horticultural products. It is also a major exporter. But the value of food and of fruit and vegetable imports from third countries has stagnated over the past several years, while that of exports has steadily increased. Thus, a major part of the increased trade is explained by the increase of intra-Community trade.

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## Executive Summary

This paper evaluates the potential import demand of the European Community for selected horticultural products from the Near East. The evaluation begins with an overview of the Common Agricultural Policy (CAP) and an analysis of the impact of macroeconomic forces on the CAP. Then the provisions for domestic production and international trade of horticultural products are discussed. The paper concludes with a qualitative and quantitative analysis of the prospective import requirements of the Community.

### Overview of the CAP

The CAP provides mechanisms to insure common prices across the member countries and to encourage member countries to buy from each other rather than from nonmember countries, called third countries. While the mechanisms vary across commodities, the CAP usually provides a price floor for domestic production and disposal means (e.g., export subsidies) to enforce it. Applying a minimum import price to third-country products insures preference for intra-Community trade (trade among member countries). This price is enforced by variable levies, fees and tariffs. Internal market prices will fall to the domestic price floor for products in which the Community production exceeds demand (e.g., milk or wheat). The price will rise to the minimum import price for products in which the Community is deficit (e.g., corn). For other commodities, the equilibrium market price will fall between the floor price and the minimum import price.

The CAP discriminates absolutely against products of third countries in which the Community is self-sufficient. Self-sufficiency is itself influenced by the CAP because holding internal prices above import price encourages domestic production while discouraging consumption. In addition, Community producers are protected from variation in world prices. And because they do not respond to world market price changes, prices in third countries vary more greatly.

Fresh fruit trade expanded by almost 18 percent between the mid 1970s and the early 1980s. Intra-Community trade captured all of that increase and more, as it increased over 44 percent. Imports from third countries actually declined slightly.

The trend was more favorable for third countries in the fresh vegetable market. Trade grew by over 40 percent. But because of the 56 percent increase in intra-Community trade, imports from third countries increased by only 17 percent. The third-country market share of tomatoes has held about constant. But the growth in Spanish trade has reduced the importance of other suppliers. In the potato market, the increase in intra-Community trade has significantly reduced the market share of third countries. For most of the other vegetables and fruits, the increasing dominance of Spain has reduced the market share of other third-country suppliers.

One of the forces behind the increase in intra-Community trade is the CAP for horticultural products. The features of the CAP tend to encourage Community production and discourage third-country trade. Based on a "basic price" set by the EC Commission, a number of prices are determined which influence domestic production and trade. First, a "buying-in" price sets a price floor in the domestic market. If the intervention by producer groups triggered by the buying-in price is not sufficient to maintain domestic prices, production is purchased by intervention agencies at a "withdrawal price."

In order to prevent a flow of produce from lower-cost third countries, international trade is carefully controlled. The mechanisms include a minimum import price (the "reference price"), an ad valorem tariff and "countervailing duties." These prices vary by season as needed to insure protection for Community producers. For example, some reference prices are high during the season of glasshouse production in the Netherlands and the United Kingdom and much lower during the field-production season. In summary, the international trade features of the CAP are pervasive, complex and effective at limiting third-country trade.

An additional aspect of the CAP is the subsidies paid to divert fresh production to the processed market. Export subsidies are then provided to assist in exporting those products to third countries. The processing and export subsidies and other aspects of the CAP have added significantly to the Community's agricultural support budget.

In 1984, an estimated 2.4 billion ECUs were spent to support the horticultural markets, up from 1.3 billion ECUs in 1980.

### Prospectus for Third Country Trade

The imminent accession of Spain to the European Community has raised concerns both inside and outside the Community. At issue is the potential increase in Community agricultural production without an increase in Community purchasing power. Also at issue is the significant Spanish production potential for products in which the Community is already self-sufficient and which may replace production from Italy, France and third countries. And the surplus production will add to the already large Community expenditures to support the agricultural sector.

The qualitative assessment considers the response of fresh fruit and vegetable demand to future population and income growth. In terms of third-country participation in Community trade, the growth in demand must be balanced against the expected growth of production in Spain and the rest of the Community. As mature, industrialized countries, they experience low rates of income and population growth. The rate of population growth in all member countries, except Ireland, was less than one percent over the decade of the 1970s. Because of these rates of population growth, the growth in demand due to population growth will be small.

While the Community is a high-income area, income growth has been and will continue to be slow. During the 1970s income growth averaged three percent or less in all of the member countries. But the continuation of the low rates of income growth does not necessarily mean that the growth of demand for fresh fruits and vegetables will grow slowly. The reason is that a large proportion of additional income is spent on products like meat and fresh fruits and vegetables.

An exhaustive review of studies of fresh fruit and vegetable consumption found that consumption growth will at most be equal to the growth rate of income. Many studies found that for each one percent increase in income, demand would increase by less than one percent. There are exceptions, of course. Potato consumption

declines as income increases. The demand for some citrus products may grow faster than income.

All of these qualitative factors were considered in the impressive and comprehensive study of Alvensleben, Behr and Jahn. In their study, they balanced the demand factors -- such as slow income and population growth -- against possible increased production in Spain. In general, the growth of Spanish trade will decrease the market penetration of third countries even if Spain does not enter the Community. If it does join the Community, not only will the growth of trade with third countries be slowed but in many cases the actual level of trade is projected to decline.

### Conclusion

The pervasive nature of the CAP for horticultural products will provide Spain a special advantage. The resulting increase in production and trade will decrease the rate of growth of trade with third countries because demand growth in the Community will be small. The reversal of historical trends will require a virtual transformation of consumption patterns in the Community. Growth of third-country trade will require dramatic changes in the marketing channels in the Community. One motivation for a change in consumption patterns would be an increased awareness and appreciation for health foods. For example, a factor contributing to the decline of red meat consumption in the United States is the concern for the impact of its consumption on one's health. A similar type of concern would lead to a changed consumption pattern in the Community.

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## I. Overview of the CAP

Reflecting the objectives of the Common Agricultural Policy (CAP), three so-called "pillars" of policy are (1) common pricing, (2) community preference, and (3) common financing. The first, common pricing, holds that national price policies should not lead to differentiated price levels across member countries. Rather Community-determined or common prices should dominate. This element is meant to insure free trade in agricultural products among member countries. The second element holds that products produced in the Community should receive preference over those produced in third countries. Thus, the establishment of common barriers to third-country products is needed. Finally, the entire community is held responsible for the financial costs of the CAP. A nation may receive more in agricultural support than it contributes to the Community budget.

Unlike agricultural policies in many developed countries that include deficiency or direct income support payments and mandatory or voluntary supply controls, the CAP relies almost exclusively on regulating market and producer price. While the terminology differs across commodities, three official, community-wide prices are determined. First, a target or base price that represents the price needed to provide adequate income levels is determined. It is also called a guide price.

Based on the target price, two additional prices are then set: the first to guarantee a minimum level of income support and stabilize prices and the second to insure Community preference. The minimum support price--the intervention or buying-in price--is normally supported by some type of direct market intervention, primarily by withholding (stockpiling) production. In addition, this price maybe used to set ad valorem tariffs.

Community preference is most often insured by a minimum import price, identified by several terms (e.g., "threshold price" for cereals). In many cases, the import price is enforced by a "variable levy" or some other mechanism to insure that the differential between import prices and internal prices will not motivate trade with third countries. The minimum import price appropriately adjusted for any tariffs and levies commonly sets an upper bound on the range of

possible domestic prices. Clearly, the minimum import price feature of the CAP discriminates absolutely against products of third countries in which the Community is self-sufficient.

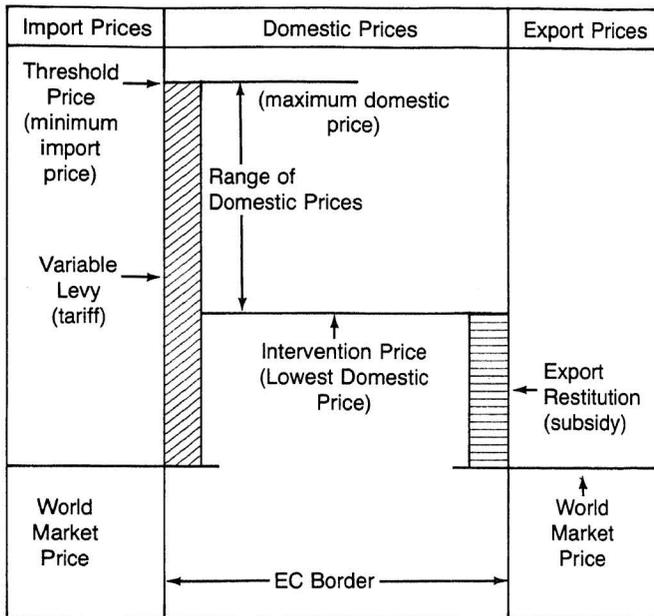
The intervention or minimum producer (market) price sets the minimum domestic price. Often it is enforced by active intervention in the market through purchase and storage activities. The Community must then provide some disposal mechanism. In addition to fostering alternative forms of domestic consumption (e.g., premiums or subsidies to divert food products to animal feed), the Community provides export subsidies. These subsidies, theoretically equal to the difference between world market and minimum Community market prices, allow EC producers to be competitive in world markets.

The essential features of the CAP are illustrated in Figure 1. The example illustrates the system for grains, which is representative of CAP policies in general. As the illustration implies, the CAP erects barriers at the EC border. Imports, normally available at prices well below internal EC prices, are limited by the variable levy which brings the import price up to the threshold or minimum import price. The intervention price establishes a floor or minimum price for domestically produced agricultural products. Any excess supply is moved into the export market by use of export restitution or subsidies when domestic prices exceed world market prices.

The impact of this import (excess) demand is developed in Figure 2. The excess demand curve is simply the horizontal difference between the domestic supply and demand curves. If an unlimited quantity is available at a world market price ( $P_w$ ), imports (indicated as free imports) assure the internal price will equal the world market price. If a minimum import price ( $P_m$ ) with the variable levy enforcing the differential between  $P_m$  and the world price is imposed, the minimum import price will reduce imports (indicated as CAP imports) while quantity supplied will increase and quantity demanded will decrease in the domestic market.

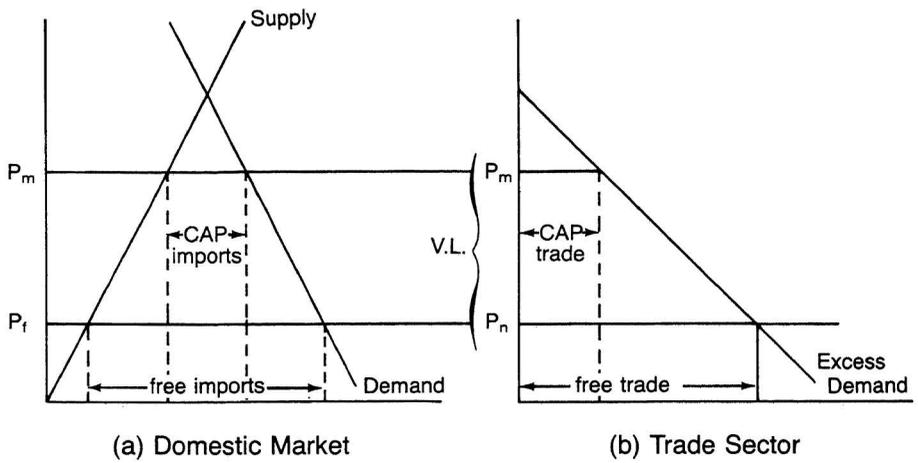
If the import price changes, the variable levy automatically changes to enforce the minimum import price. Thus, the quantity imported does not vary with import price variation unless that price exceeds the threshold price. The CAP policy acts like a binding quota except that world price variation is not transmitted to

Figure 1. The CAP Grain Market Price System



Note: Adapted from Policy Options for the Grain Economy of the European Community, Research Report 35, International Food Policy Research Institute, Nov. 1982.

Figure 2. Excess Demand with Free Trade and the CAP



Community producers and consumers. It is convenient to note at this point a concept to be developed later: the CAP protects against price change due to a change of the value of an exporter's currency. The variable levy simply changes to offset the devaluation effect.

## II. Macroeconomic Forces and the CAP

Monetary and fiscal policies have directly affected the CAP primarily through variation in exchange rates. The movement of the value of the currency of a member country against a second reflects differential rates of inflation and rates of interest. Over time the movement also reflects differing levels of competitiveness in world markets and their subsequent impact on the nation's balance of payments. In order to evaluate the CAP under the current floating exchange rate regime, it is necessary to review the evolution of the mechanisms that translate common prices into national prices within the Community.

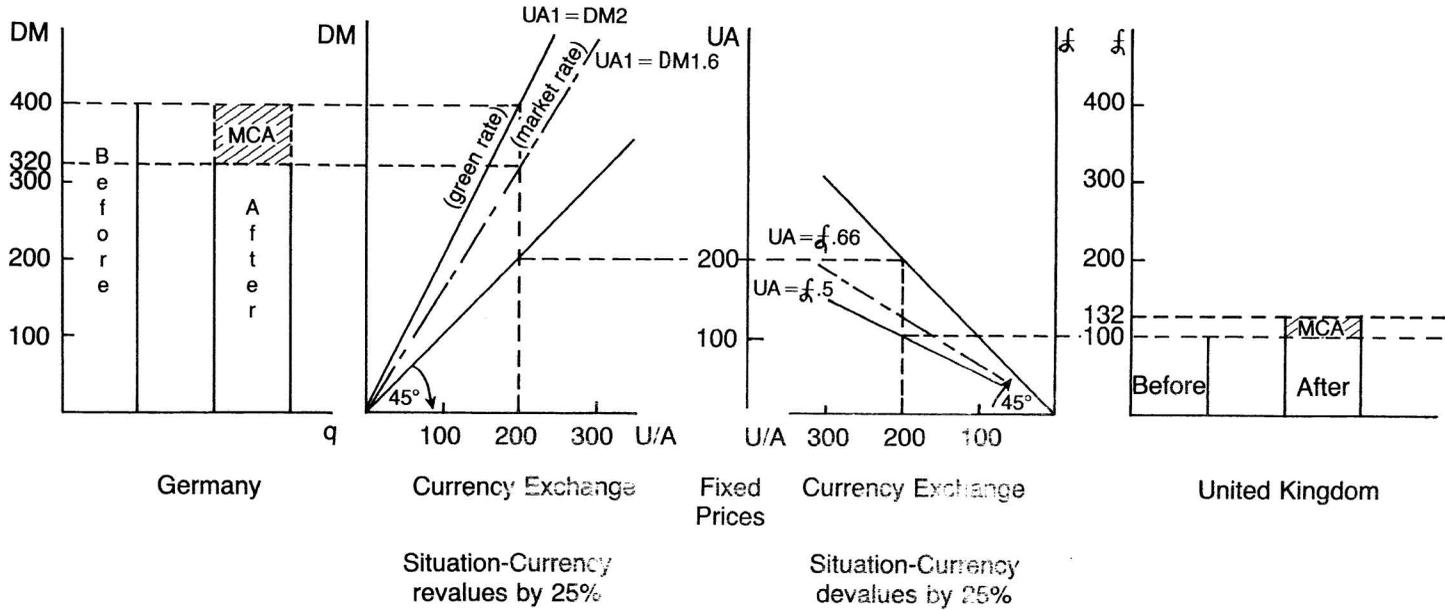
Lacking an acceptable alternative (e.g., a common currency), the Community adopted an artificial currency to denominate common prices. The artificial currency, called the unit of account (UA), had been developed to measure financial obligations and flows by the EC (and before that by the European Coal and Steel Community). This unit of account, which equalled one U.S. dollar, was adopted for the denomination of common prices. The U.S. dollar at that time was convertible to gold; hence the original UA has been termed the gold parity UA.

The common prices denominated in units of account were translated into a member country's currency using the official gold-based parity (fixed) exchange rate declared to the International Monetary Fund. Since the value of the UA equaled the U.S. dollar, the fixed exchange rate between the member country's currency and the U.S. dollar translated fixed prices to the country's prices. The system worked adequately as long as exchange rates were fixed. With the revaluation of German and the devaluation of French currencies against the dollar and hence against the UA in 1969, mechanisms evolved that altered the impact of exchange rate changes on agricultural prices.

Figure 3 provides a simple mathematical and graphical framework for illustrating the potential impact of a change of exchange rates on national prices. If, for example, the minimum producer price for a commodity is 200 UA, at a German exchange rate of  $UA = DM2$ , the German minimum producer price would be DM400 (Deutschmark). (In Figure 3, the price of 200 UA on the "fixed price" line in the center

Figure 3. Impact of Currency Value Changes on Internal Policy Prices and Determination of Monetary Compensation Amounts

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of the diagram is traced left to the 45° line in the currency exchange sector, then up to the appropriate line that converts UA into DM which is labeled UA1 = DM2. The DM equivalent of 400 is found to the left on the German price line.) An exchange rate for the United Kingdom of UA = £.5 gives a minimum producer price of £100. The system is internally consistent, as the £ = DM4.00.

Now, reflecting macroeconomic forces, the German currency appreciates by 25 percent against the UA. This is shown in the diagram as a rotation downward of the currency exchange line (to UA1 = DM1.6), as fewer DMs are required to purchase a UA. The appreciation of the DM from UA = DM2 to UA = DM1.6 reduces the German minimum producer price from 400 DM to 320 DM. Since German farmers would not readily accept an immediate decline in their support prices, some method was needed to neutralize temporarily the effect of the exchange rate changes and to allow prices to adjust over time. This was accomplished by maintaining exchange rates for translating Community prices to national prices at a fixed rate, the so-called "green rate." In Figure 3, the green rate is indicated by the pre-devaluation rate and maintains the minimum producer price at 400 DM.

Simply establishing the green rates is not sufficient. The revaluation of the DM against the UA causes the exchange rate between the DM and £ to change as well. It is now 1:3.2. If the commodity can be purchased in the U.K. at the minimum producer price of £100, an exporter could purchase the commodity at DM320 in the U.K. and resell it at DM400 in Germany. To prevent commodity arbitrage, an import tax, called the monetary compensatory amount (MCA), of DM80 is applied to German imports of this commodity. The MCA is meant to equalize prices in Germany with those in the rest of the Community.

While an appreciating currency country needs to apply an import tax, one with a depreciating currency requires an import subsidy. As Figure 3 illustrates, when the £ depreciates to £.66 = UA, the minimum producer price increases to £132, which would be unacceptable to U.K. consumers. Again, some method is needed to neutralize the impact of exchange rate changes, and the green rate/MCA system makes this possible. First, the use of the predevaluation rate to translate Community prices of the commodity to £s keeps the minimum producer price at its former level. But now, the price is lower in

the U.K. than the rest of the Community, so an import subsidy must be used to equalize price.

The MCAs for the United Kingdom and other countries with depreciating currencies are called negative MCAs because their prices are lower than the rest of the community. Conversely, those for Germany and other countries with appreciating currencies are called positive MCAs because their prices are higher than the rest of the community.

The MCA system was meant to be a temporary arrangement allowing the affected countries to unify prices gradually with the rest of the Community. But with the volatile period that followed the devaluation of the dollar and the abandonment of fixed exchange rate parities and with the introduction of floating exchange rates, the MCA became a permanent fixture of the CAP.

The example to this point has assumed simple movement from one fixed exchange rate to a second. In reality, the system has to respond to numerous changes resulting from the floating exchange rate regime. To accomplish this, a constant percent monetary coefficient based on the ratio of the market exchange rate to the green exchange rate is calculated, from which variable MCAs are in turn calculated. For the example developed above, the German monetary coefficient is .8 ( $1.6/2.0$ ) and the fixed MCA percentage is 20 percent ( $1-.8$ ) which, when multiplied by the minimum producer price, yields the MCA of DM80. If the DM appreciated further to 1.5 to a UA, the fixed MCA percentage would increase to .25 and the MCA to DM100.

In strong currency (positive MCA) countries, the impact of the MCA system was higher consumer prices, resulting in decreased quantity demanded from domestic and foreign producers. If demand is inelastic, domestic producers will gain from the higher prices. In weak currency (negative MCA) countries, the system reduces producer prices. The negative MCAs are equivalent to subsidized imports to the detriment of domestic producers and to the benefit of domestic consumers. To the extent that the realignment of currencies that evolved during the 1970s should have been reflected in domestic prices, the MCA system changed the pattern and level of trade with other member countries and with third countries.

The green rates of exchange and hence the MCAs have had to be determined politically, as no rules have been adopted for their

automatic adjustment in line with changes in the value of member countries' currencies. Toepfer (August 1978, p. 44) summarized the result in the late 1970s:

The m.c.a. system divides the European "common" market in agricultural products into national markets with different price levels. No doubt, the common agricultural market will go on needing for some time the support of the m.c.a. system to prevent its total collapse but, instead of a temporary measure, it has become a most sophisticated market regulation device and a first-rate political problem.

Although the member states may see the MCAs as a means to achieve stability of farm prices, it can also be seen as means to manipulate trade.

The evolution of the MCAs reflects, among other things, the differential rates of domestic inflation and so differential movements in exchange rates operating against fixed green rates (Figure 4). The prices in the strong currency countries of Belgium, Luxembourg, the Netherlands and West Germany were slightly above the Community prices for the entire period. The MCA percentage was relatively stable throughout the period. For the weak currency (high inflation) countries of France, Italy, Ireland and the United Kingdom, prices fell much below the Community level. Moreover, the MCA percentage was highly variable throughout the period. The largest discrepancy among national prices occurred in the fall of 1976 when the negative MCA for the United Kingdom reached 45 percent while the positive MCA for Germany was about 10 percent. German prices were approximately 60 percent higher than prices in the United Kingdom.

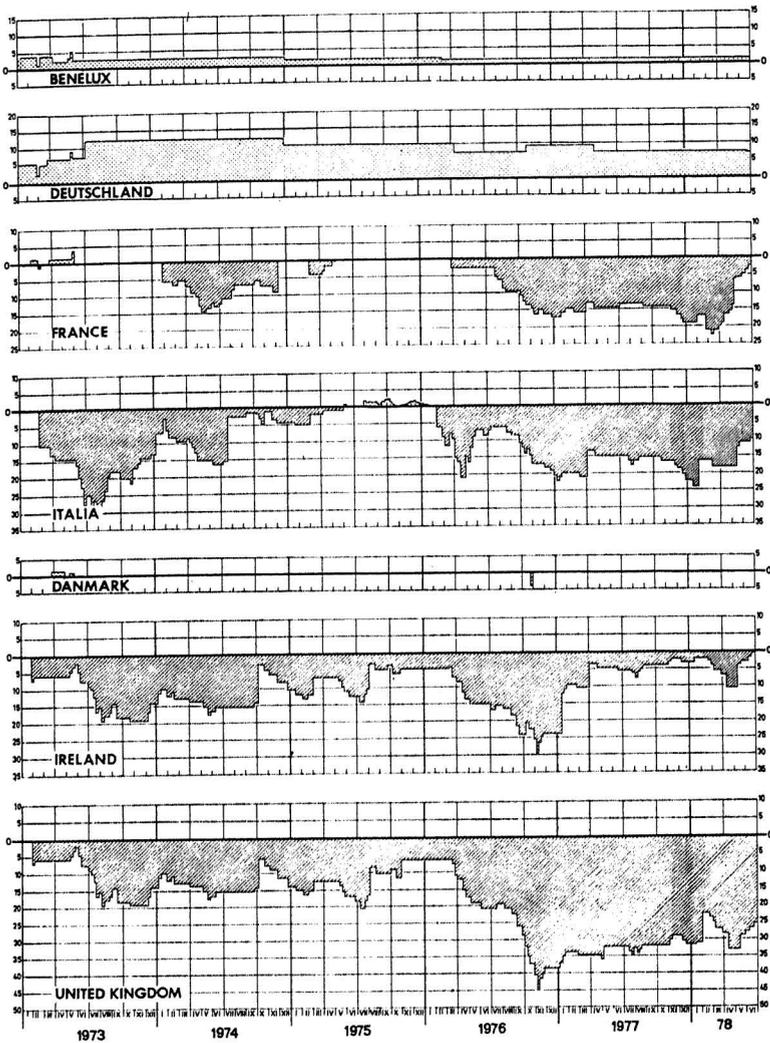
On October 23, 1978, the MCA percentages were

Germany	+10.8%
Benelux	+3.3%
France	-10.6%
Italy	-14.6%
Ireland	-3.3%
United Kingdom	-28.6%

The size of the MCA percentage for the United Kingdom indicates the extent to which the system had deviated from trade flows determined

**FIGURE 4**

**RATES (IN percent) USED FOR THE CALCULATION OF MONETARY COMPENSATORY AMOUNTS\*, 1973-78**



Source: The Agricultural Situation in the Community, 1978, p. 96.

\*Minimum rates.

by the relative purchasing power of each currency. It also indicates the differences in price levels across the Community in late 1978.

The size of the MCAs and the inability to move toward harmonized prices necessitated the development of a more unified and stable monetary system. During 1972-78, such a system was being designed, with the European Monetary System (EMS) officially adopted in early 1979. Because the provisions of the EMS are so complex, only the basic elements and their impact on agriculture are discussed here.

The intent of the EMS "is to create a zone of monetary stability in Europe, through the implementation of certain exchange rate, credit and resource transfer policies backed up and guided by a new policy of coordination aimed at prompting the convergence of economic policies and performances" (Directorate-General, p. 67). The "pillar" of the EMS is the European Currency Unit (ECU) that serves as the numeraire currency. If the EMS is fully implemented, the ECU will serve many of the same functions for the Community that Special Drawing Rights play in international finance: a reserve currency, a measure to determine financial obligations, and a means to settle international transactions.

To promote monetary stability, the EMS established a central rate (also called guiding rate) for each currency (in ECUs), and each participating country is committed to keep its market rate within  $\pm 2.25$  percent ( $\pm 6$  percent for Italy) of that central rate. The United Kingdom has agreed to the EMS but has not agreed to observe the currency stabilization mandates. Greece is to be included in the EMS by 1985. Rules guiding intervention and financial assistance are provided in the EMS agreement.

Under the EMS, the relation of the central rate and the green rate determine MCAs. Determination of MCAs in this manner is believed to add stability because MCAs will be revised only if the central rate or the green rate is revised. The determination of the German MCA is illustrated below. In early 1982, the DM central rate was 1ECU:2.33379 and the green rate was 1ECU:2.57524, giving a difference of 9.4 percent. This difference is reduced by an arbitrarily determined "franchise" of one percentage point, yielding an MCA of 8.4 percent. This rate holds as long as the central rate and green rate do not change. For the countries with independently

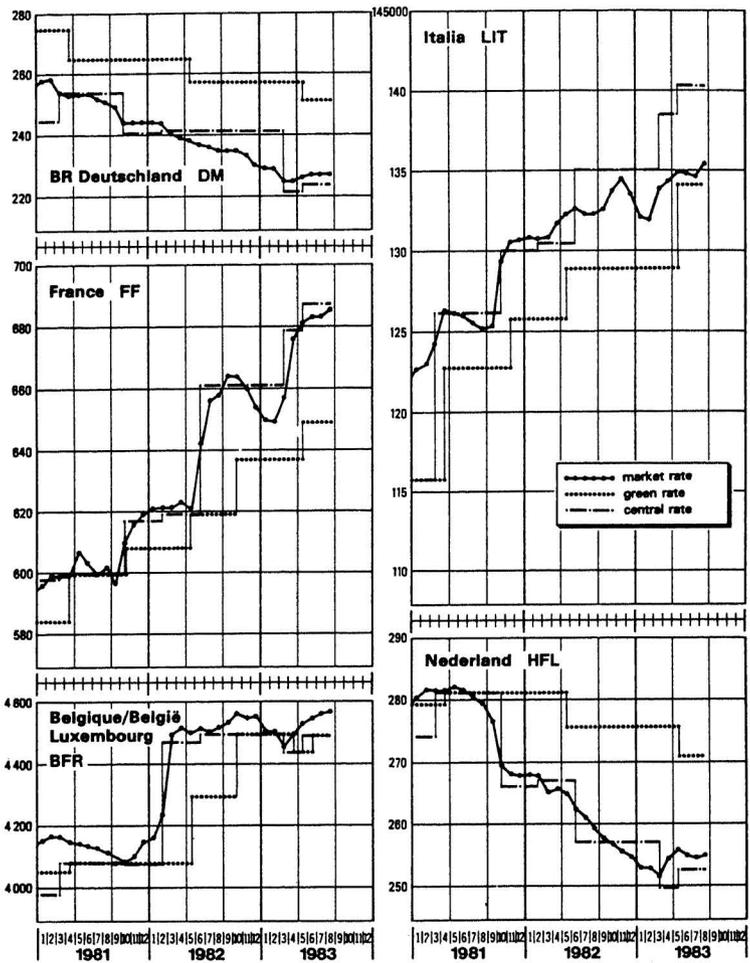
floating currencies (U.K., Italy and Greece), a similar but more complex method is used.

The EMS has been forced to cope with the economic recession of the early 1980s coupled with the divergent monetary and fiscal policies accompanying the change. The movements of market exchange rates, green rates and central rate for 1981 to 1983 are shown in Figure 5. In this diagram an appreciation of a currency is indicated by a downward sloping line as fewer units of a national currency equal the ECU, a depreciation by an upward sloping line. The depreciation of the French franc and the Italian lira have necessitated much larger and more frequent revisions in the central rates than originally thought would be necessary when the EMS was adopted. Despite revision of the green rates, the changes in the central rates have mandated retention of the MCA system. But it should be noted that some progress has been made in unifying price levels.

In addition to its impact on internal trade, the MCA system influences external trade as well. With free trade, a devaluation (or depreciation) of an exporter's currency reduces import prices (measured in the importing country's currency) and so stimulates imports. A revaluation (or appreciation) has the opposite effect. For many products, the system used to calculate variable levies neutralizes these potential effects.

Levies are calculated as the difference between the minimum import price and the market price; all are measured in ECUs. The market price quoted in the exporter's currency is converted to ECUs by a currency factor based on the relative strength of the exporter's currency to the currencies of the Community. For example, the Community minimum import price of a cereal may be 160 ECUs. An actual import price of \$130 multiplied by the currency factor of .675165 (the 1978/79 rate for cereals) gives a price of 88 ECUs. The variable levy is then 72 ECUs. If the dollar depreciates against the Community's currencies, the currency factor might decrease to .6, for example, reducing the import price and increasing the variable levy. In this way, internal Community prices are isolated from changes in a third country's exchange rate.

FIGURE 5 CURRENCY PARITIES, 1981-83



Source: Agricultural Situation in the Community, 1983, p. 182.

The MCA system has not been applied to horticultural products because much of the Community's supply is produced in weak currency (negative MCA) countries and the seasonality and perishability of production limits potential commodity arbitrage. Because MCAs have not been applied, the direct impacts on production and trade arise from the use of green rates of exchange to translate Community prices into national currencies. Indirect impacts arise from the distortion of relative prices due to the discriminatory application of MCAs.

In a strong currency (positive MCA) country consumption of horticultural products would be stimulated by the relatively higher prices of other products subject to the MCAs. In addition, consumption would be stimulated as import prices would fall with appreciation of the country's currency. The magnitude of the impact is determined (1) by the own-price elasticity of demand and the appreciation of the currency and (2) by the cross-price elasticity of demand and the distortion in relative prices of substitutes and complements arising from the MCA system. In any case, both effects stimulate horticultural consumption. The opposite result obtains in weak currency (negative MCA) countries as both effects tend to restrain horticultural consumption.

The use of green rates, rather than market exchange rates, to translate Community prices into national currencies would tend to stimulate production in positive MCA countries and restrain production in negative MCA countries. The net effect on trade then is determined by the comparison of producer response to consumer response.

### III. The CAP and Horticultural Products

Horticultural products are a very diverse group of commodities and, as such, generalizations are difficult to reach without rendering significant violence to actual situations. The Community is self-sufficient in some products but a major importer of others. Reflecting its climate, the Community is an important importer during the winter season of some products and an important exporter during other seasons. In this section, we initially concentrate on the principal imported products (wine, citrus, tomatoes and potatoes) and on the period (October-March) during which the Community is a major importer of them. Imports compete primarily with field-grown production in Italy and France and greenhouse production in the United Kingdom and the Netherlands.

#### Evolution of EC Horticultural Market

When intra-Community and third country trade are included, the Community is the world's largest importer of food products in general, and fruits and vegetables in particular. In part reflecting the enlargement of the Community to 9 countries, food trade expanded from 16 billion ECUs in 1974 to 27 billion ECUs in 1977 (Table 1). Since then, however, the value of food trade has stagnated with annual imports varying from about 26 to 27.5 billion ECUs. The value of fruit and vegetable trade has a similar pattern, fluctuating around the 7 billion mark since 1979.

Horticultural product trade has expanded steadily throughout the study period. A comparison of three year averages shows that since 1974-76 wine trade increased by 32.4 percent, fresh fruit by 17.7 percent, and fresh vegetables by over 40 percent. The most important individual products are tomatoes, oranges and potatoes. Of these, trade in potatoes increased 35.9 percent, tomatoes 21.6 percent. Orange trade, on the other hand, declined by almost 13 percent. On the basis of the growth in fruit and vegetable trade in recent years, some suggest that the potential may exist for expansion of third-country exports. But, as we shall see in the discussion of the CAP for horticultural products, the emergence of Spain as a principal

TABLE 1 EC TRADE IN FRUITS AND VEGETABLES AND IN FOOD, 1973-1982  
(Million ECUs)

Year	Imports		Exports	
	Fruits & Vegetables	Food	Fruits & Vegetables	Food
1973	3968	16057	429	5782
1974	4237	16936	781	7094
1975	4744	18825	854	7428
1976	5859	23434	984	8252
1977	6451	27023	1139	9600
1978	6544	25889	1333	10669
1979	7123	27580	1555	12441
1980	6526	24281	1424	14096
1981	7083	26399	1604	18936
1982	7617	28382	1695	17672

Source: Agricultural Situation in the Community, several issues. For example, in the 1983 issue the data are found on pages 252 and 254.

supplier has limited and will continue to limit potential expansion of third-country trade.

The impact of the CAP and of other factors explains why intra-Community trade has accounted for almost 92 percent of the overall 32.4 percent increase in wine trade. Intra-Community trade increased by over 39 percent while third-country imports increased only 11 percent (Table 2). The decline in imports of the fresh fruit is even more dramatic. While total trade increased by almost 18 percent, intra-Community trade increased by over 44 percent and imports from third countries declined. Fresh vegetable trade provided the largest increase for third-country imports with an increase of almost 17 percent, but the growth in intra-Community trade was much larger as it accounted for almost 84 percent of the increased trade.

Third-country trade for tomatoes, oranges and potatoes illustrates their declining importance in the Community market (Table 3). Tomato trade increased 21.6 percent. But intra-Community trade accounted for almost 76 percent of that increase and the third-country share of the market declined by almost 10 percent. Potato trade expanded by almost 36 percent, but third-country trade declined by almost 38 percent. The market share of third-country trade declined from slightly over 30 percent to 14 percent. The trade in fresh oranges declined by almost 13 percent, but third-country trade fell by over 18 percent. Although smaller than third-country trade (10.7 percent market share), intra-Community trade expanded by almost 90 percent.

A review of the recent developments in the EC horticultural market suggests two observations. First, in the aggregate, horticultural markets have stagnated since the late 1970s. Second, in stagnant markets for individual products, intra-Community trade has displaced third-country trade. In expanding markets, intra-Community trade has accounted for the lion's share of the increase.

The discussion of specific products that follows includes: (1) total EC trade and that with third countries; (2) third-country market share; and (3) the Spanish market share. The discussion is extended by a graphic presentation (Figures 6-16), and detailed data are presented in Appendix A.

TABLE 2 INTRA-COMMUNITY AND THIRD COUNTRY TRADE IN SELECTED HORTICULTURAL PRODUCTS, ANNUAL AVERAGES FOR 1974-76 AND 1981-83

Product Group	Intra-Trade		Third Country		Total
	Quantity	Market Share	Quantity	Market Share	
Wine (1000 h. liters):					
1974-76	16283.3	75.6	5260.0	24.4	21543.0
1981-83	22686.0	79.5	5833.0	20.5	28519.0
percent Change	39.3		10.9		32.4
Fresh Fruit (1000 m.t.)					
1974-76	2886.3	41.5	4067.7	58.5	6954.0
1981-83	4165.0	50.9	4019.0	49.1	8184.0
percent Change	44.3		-1.2		17.7
Fresh Vegetables (1000 m.t.)					
1974-76	3775.7	60.4	2471.2	39.6	6247.0
1981-83	5873.0	67.1	2886.0	32.9	8759.0
percent Change	55.5		16.8		40.2

Source: Agricultural Situation in the Community.

TABLE 3 INTRA-COMMUNITY AND THIRD COUNTRY TRADE IN TOMATOES, ORANGES AND POTATOES, ANNUAL AVERAGES FOR 1974-76 AND 1981-83

Product Group	Intra Trade		Third Country		Total
	Quantity	Market Share	Quantity	Market Share	
	(1000 m.t.)	(percent)	(1000 m.t.)	(percent)	(1000 m.t.)
Tomatoes:					
1974-76	339.7	48.0	368.2	52.0	708.0
1981-83	445.8	52.9	405.3	47.1	861.1
percent Change	34.2		10.1		21.6
Oranges:					
1974-76	104.2	4.9	2003.4	95.1	2107.5
1981-83	196.5	10.7	1640.2	89.3	1836.7
percent Change	88.6		-18.1		-12.9
Potatoes:					
1974-76	1522.9	69.5	668.2	30.5	2191.1
1981-83	2560.4	86.0	416.6	14.0	2977.0
percent Change	68.1		-37.7		35.9

Source: Agricultural Situation in the Community.

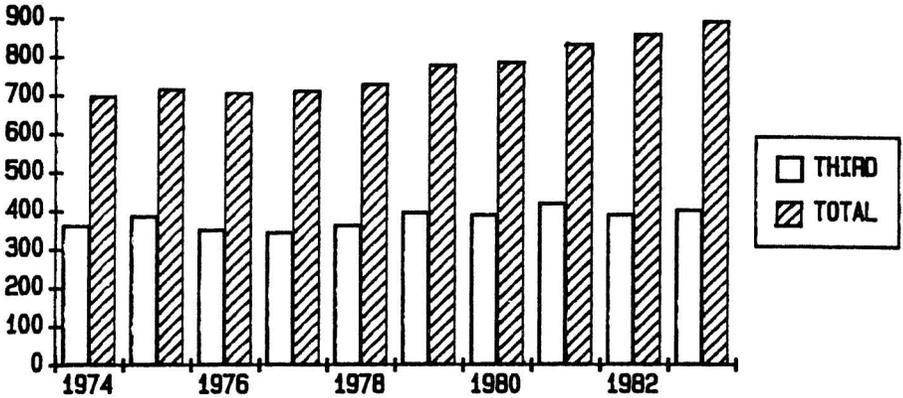
Vegetable and Fruit Trade Total trade in tomatoes increased significantly from 700 thousand metric tons (TMT) in 1974 to almost 900 TMT in 1983 (Figure 6A). In comparison, third-country trade increased only marginally (from 360 TMT to slightly over 400 TMT), so their market share declined from about 53 percent in 1974/75 to about 45 percent in 1982 and 1983 (Figure 6B). The gains in intra-Community trade were about equal in both seasons. In the early season, reflecting increased greenhouse production, intra-Community trade increased by almost 50 TMT; late season trade increased by 60 TMT (Figure 7A). In contrast, third-country trade stagnated, and so their market share declined from 81 to 75 percent of the early season market and from about 12 to 9 percent of the much less important late season market (Figure 7B). During the 1979-83 period, the Spanish share of third-country trade increased from 73 to 80 percent for the early season market and from about 34 percent to around 60 percent for the late season market (Figure 7C).

For another important vegetable traded, potatoes, the pattern of trade was similar, except Spain did not significantly increase its market share. Total trade trended upward with large increases in 1976 and 1977, when a temporary spurt in third-country trade increased total trade well above trend (Figure 8A). With the exception of those two years, third-country trade stagnated, so their market share declined from almost 30 percent in 1974 to less than 14 percent in 1981, a decline of over 50 percent (Figure 8B). Much of the growth in total trade occurred in the fall season when intra-Community produce dominates the market. During the 1979-83 period early season (January 1-May 15) market for new potatoes, total trade stagnated, as did third-country imports (Figure 9A). The late season trade (May 15-June 30) was more variable than that of the early season but, by and large, can be described as stagnant as well (Figure 9B). The third-country market share varied between 80 and 90 percent of the early market and 25 and 35 percent of the late market.

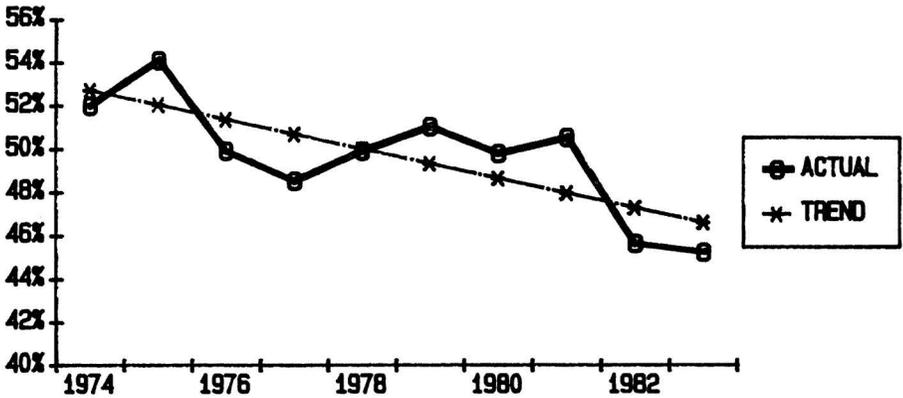
During the 1979-83 period total trade in the very large onion market trended upward from 778.7 to 829 TMT (Figure 10A). Intra-Community trade fluctuated but remained relatively constant while third country trade increased by 14 percent. All of the third country increase and more went to Spain, as exports by other third

FIGURE 6. EC TOMATO TRADE  
1974-83

A. TOTAL AND THIRD COUNTRY  
(1000 METRIC TONS)



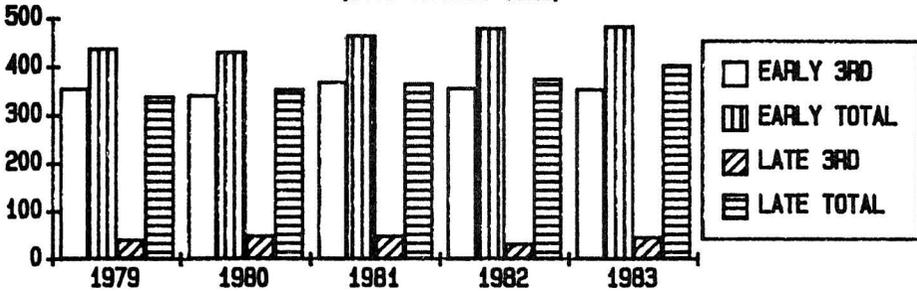
B. THIRD COUNTRY MARKET SHARE  
(PERCENT)



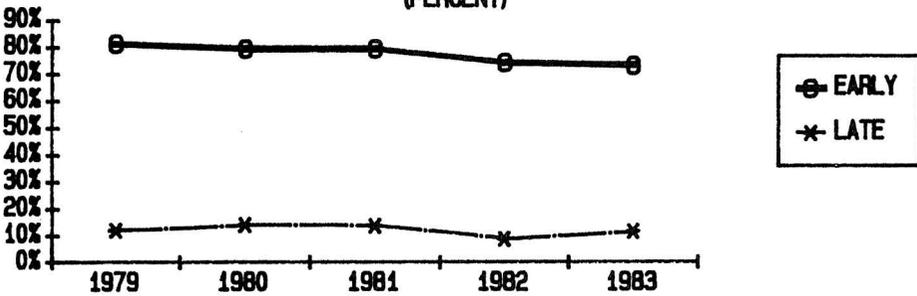
SOURCE: APPENDIX TABLE A.1

**FIGURE 7. EC TOMATO TRADE  
BY SEASON AND SOURCE  
1979-83**

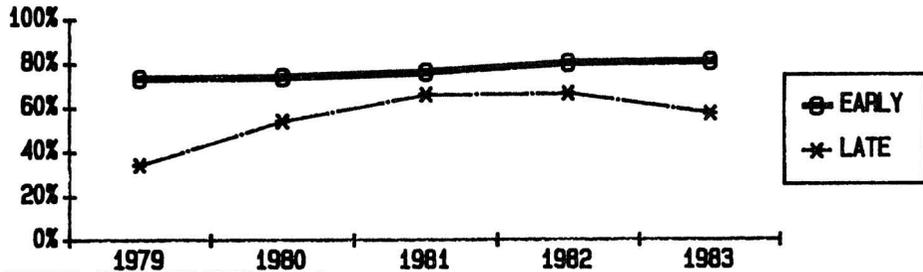
**A. THIRD COUNTRY AND TOTAL  
(1000 METRIC TONS)**



**B. THIRD COUNTRY MARKET SHARE  
(PERCENT)**



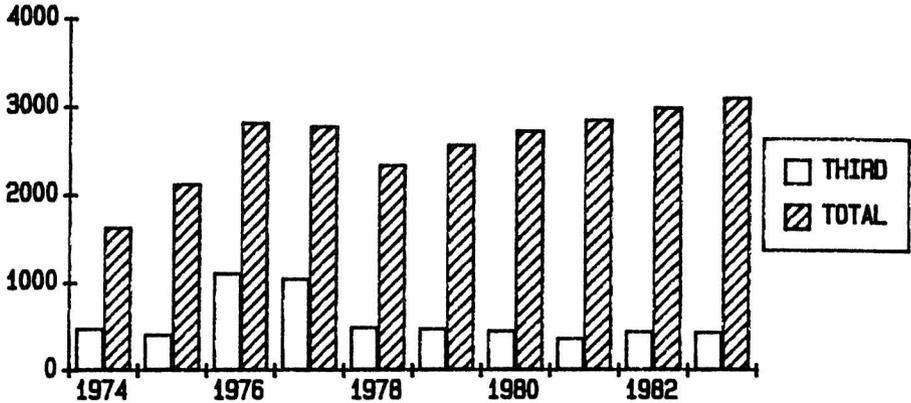
**C. SPANISH SHARE OF THIRD COUNTRY TRADE  
(PERCENT)**



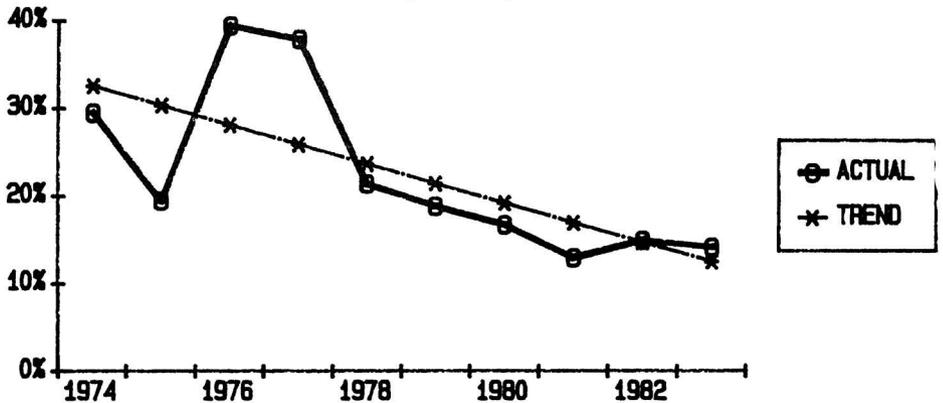
SOURCE: APPENDIX TABLE A.4

FIGURE 8. EC POTATO TRADE  
1974-83

A. TOTAL AND THIRD COUNTRY  
(1000 METRIC TONS)



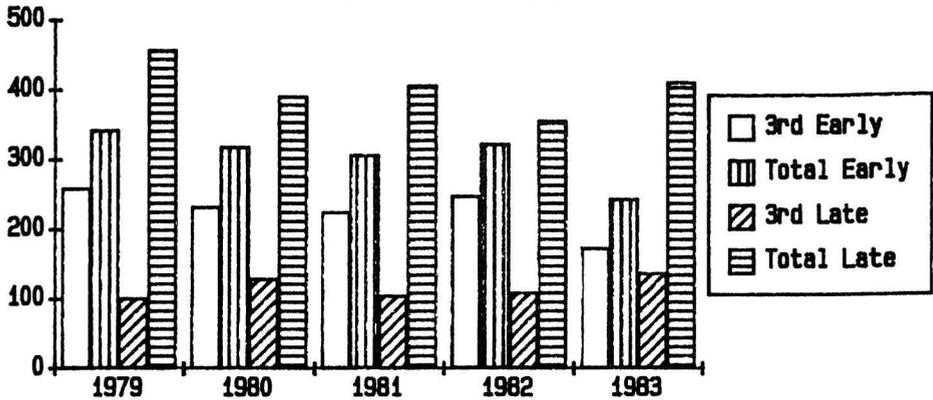
B. THIRD COUNTRY MARKET SHARE  
(PERCENT)



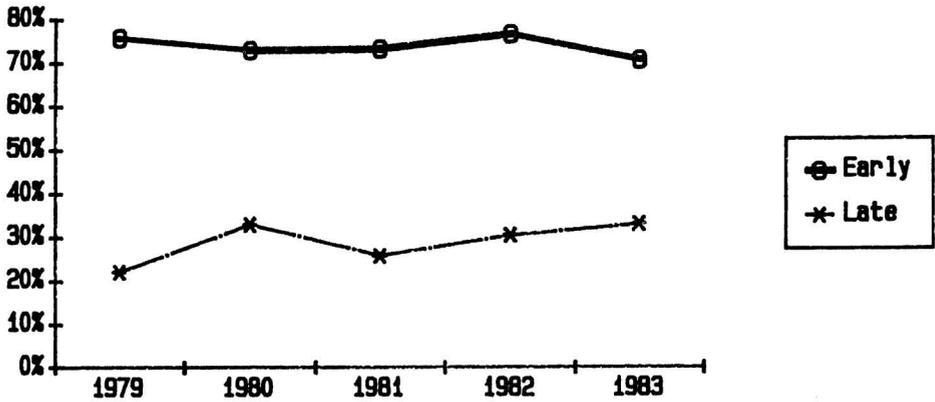
SOURCE: APPENDIX TABLE A.2

FIGURE 9. EC POTATO TRADE  
BY SEASON AND SOURCE  
1979-83

A. TOTAL AND THIRD COUNTRY  
(1000 METRIC TONS)



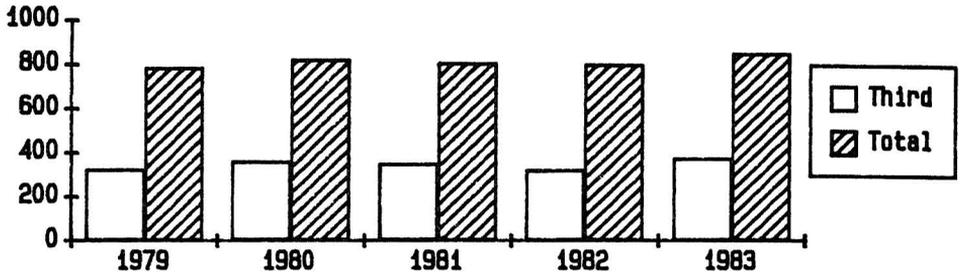
B. THIRD COUNTRY MARKET SHARE  
(PERCENT)



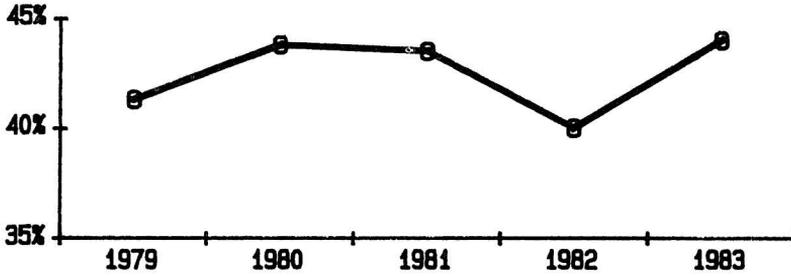
SOURCE: APPENDIX TABLE A.5

FIGURE 10. EC ONION TRADE  
1979-83

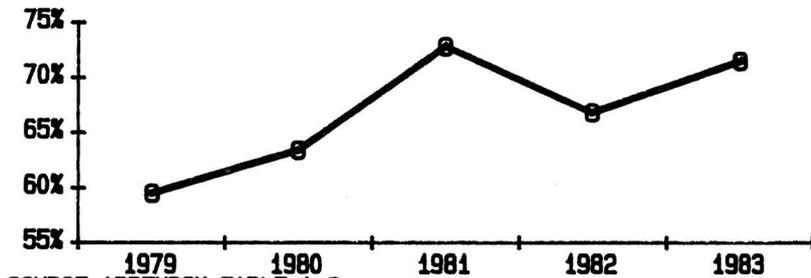
A. THIRD COUNTRY AND TOTAL  
(1000 METRIC TONS)



B. THIRD COUNTRY MARKET SHARE  
(PERCENT)



C. SPANISH SHARE OF THIRD COUNTRY MARKET  
(PERCENT)



SOURCE: APPENDIX TABLE A.6

countries to the Community declined by nearly 19 percent and Spain increased by 35 percent (Figure 10C).

Early season (November 1-May 14) cucumber trade declined slightly while late season trade stagnated (Figure 11A). Third-country market share held relatively constant at about 30 percent of the early market and 6 to 8 percent of the late market (Figure 11B). Spain dominated the early market with its share of third-country trade peaking at 95 percent in 1982, and it exceeded 90 percent in the most recent four years (Figure 11C). Spain is less important in the late market, but its market share trended upward and reached 30 percent in 1983.

Seasonal trade in green peas is shared about equally between third-country and Community producers during the early season (September 1-May 31) (Figure 12A). During the late season intra-Community trade dominates. The market share of third countries has varied between 42 and 60 percent (Figure 12B). Of that trade, the Spanish market share has also varied considerably, but it generally accounts for about 75 percent (Figure 12C).

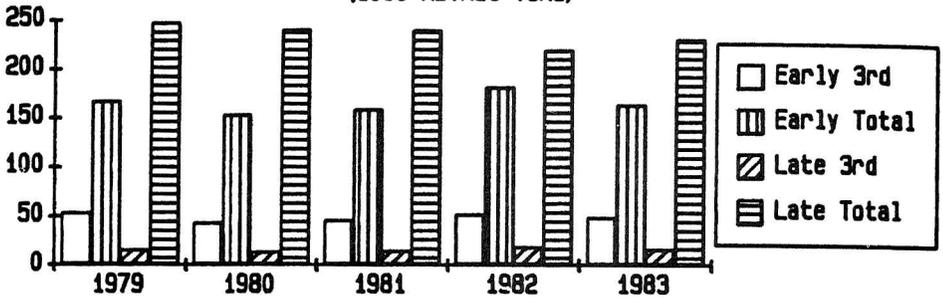
The watermelon and sweet melon trade have grown considerably during recent years (Figure 13A). The third-country market share has varied between 80 and 85 percent of the watermelon market; its share of the sweet melon market has been around 50 percent (Figure 13B). While the third-country shares have been relatively constant, those of Spain have increased dramatically. Its share of the third-country watermelon market has increased from 80 to 93 percent and that of the sweet melon market from 74 to 80 percent (Figure 13C).

For the zucchini and eggplant markets, total trade has edged upwards (Figures 14A and 15A). Third-country trade usually accounts for between 70 and 75 percent and appears to be trending upwards, while the third-country share of the eggplant market has decreased from 57 to 47 percent (Figures 14B and 15B). The Spanish share of the third-country zucchini market has trended upward, reaching almost 95 percent of the slightly expanding market in 1983. Spanish exports of eggplant to the Community have been increasing so that by 1983 Spain's share of the declining third-country export trade with the Community had reached two-thirds.

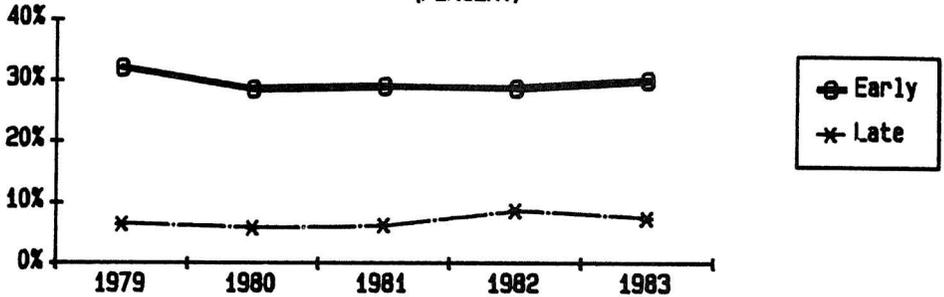
Off-season green bean trade has stagnated, varying from 44 to 51 TMT; third-country trade reflects that stagnation. Seasonal trade

FIGURE 11. EC CUCUMBER TRADE  
BY SEASON AND SOURCE  
1979-83

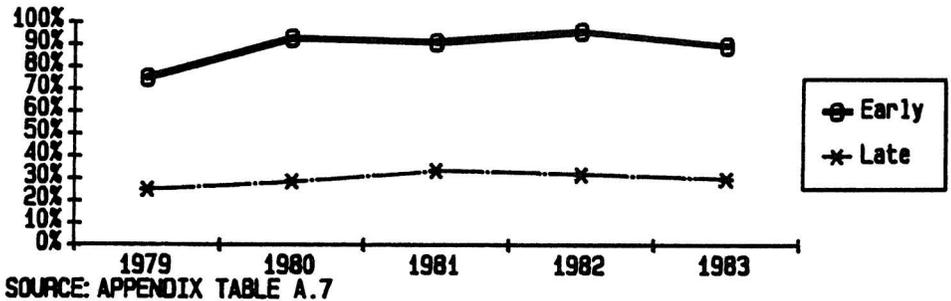
A. THIRD COUNTRY AND TOTAL  
(1000 METRIC TONS)



B. THIRD COUNTRY MARKET SHARE  
(PERCENT)



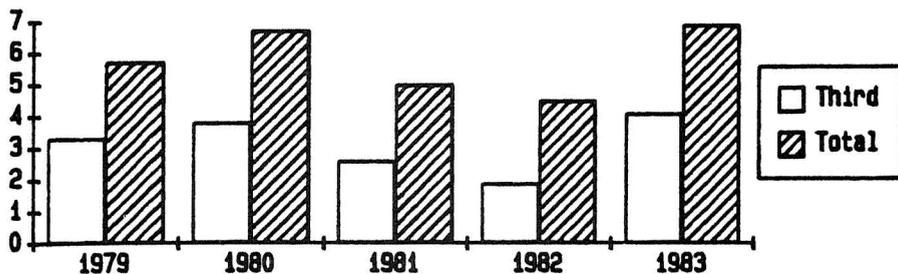
C. SPANISH SHARE OF THIRD COUNTRY TRADE  
(PERCENT)



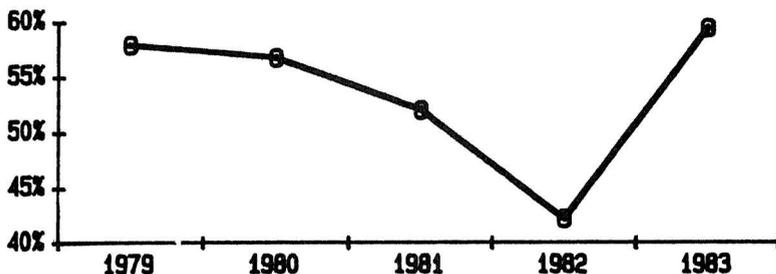
SOURCE: APPENDIX TABLE A.7

**FIGURE 12. EC GREEN PEA TRADE  
EARLY SEASON, 1979-83**

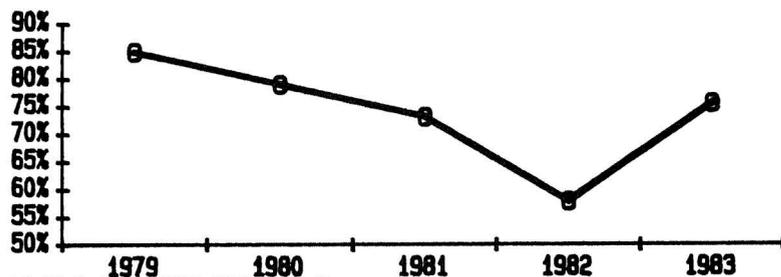
**A. THIRD COUNTRY AND TOTAL  
(1000 METRIC TONS)**



**B. THIRD COUNTRY MARKET SHARE  
(PERCENT)**



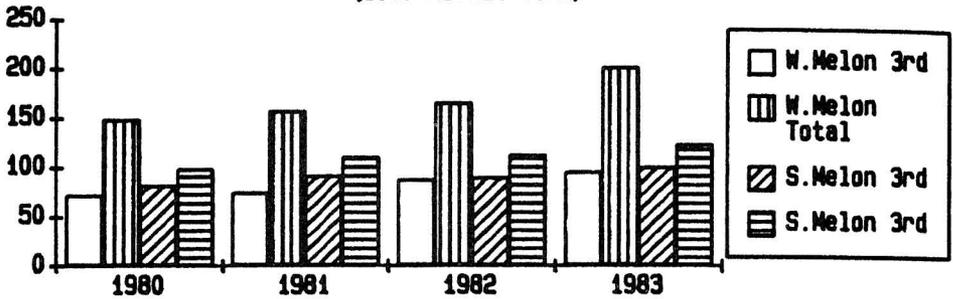
**C. SPANISH SHARE OF THIRD COUNTRY MARKET  
(PERCENT)**



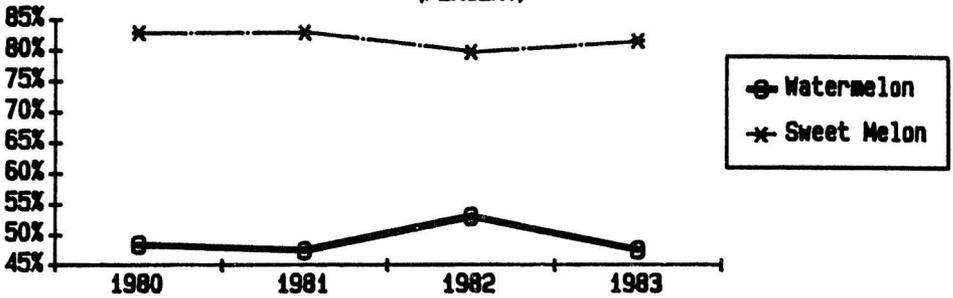
SOURCE: APPENDIX TABLE A.6

FIGURE 13. EC WATERMELON AND SWEET MELON TRADE  
1980-83

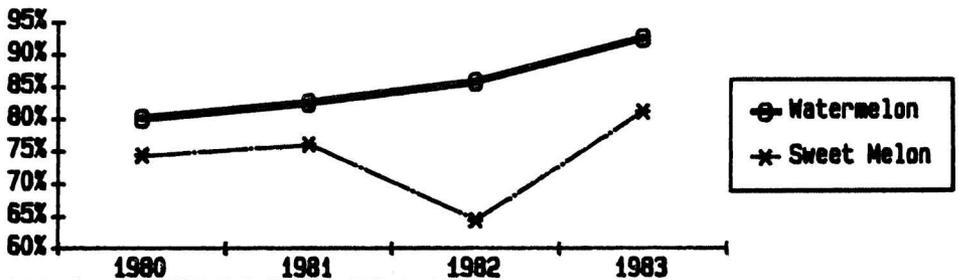
A. THIRD COUNTRY AND TOTAL  
(1000 METRIC TONS)



B. THIRD COUNTRY MARKET SHARE  
(PERCENT)



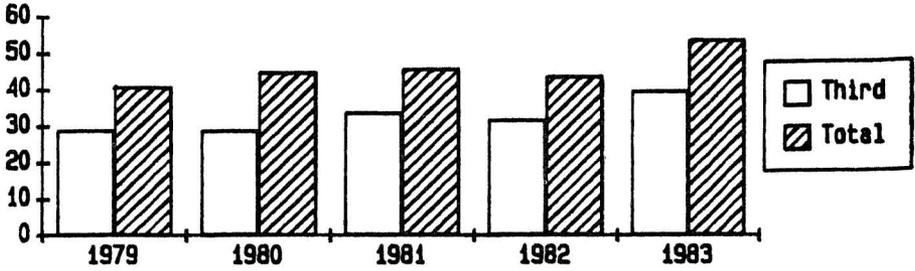
C. SPANISH SHARE OF THIRD COUNTRY TRADE  
(PERCENT)



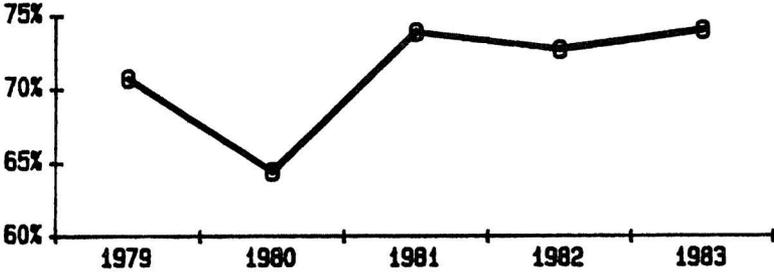
SOURCE: APPENDIX TABLE A.9 AND A.10

**FIGURE 14. EC ZUCCHINI TRADE  
1979-83**

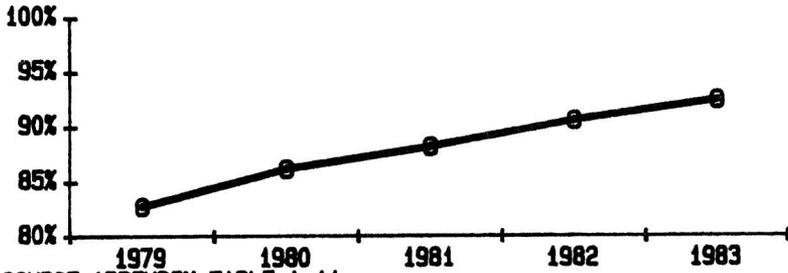
**A. THIRD COUNTRY AND TOTAL  
(1000 METRIC TONS)**



**B. THIRD COUNTRY MARKET SHARE  
(PERCENT)**



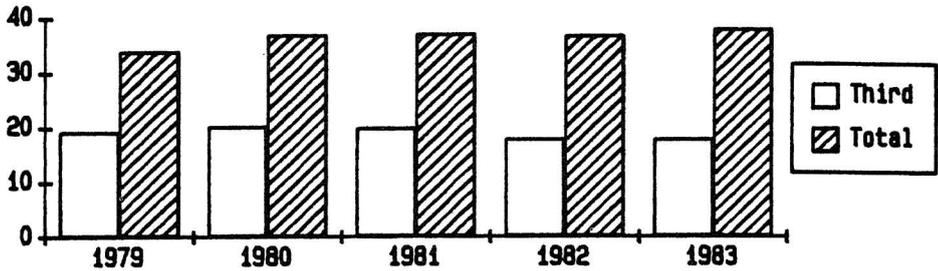
**C. SPANISH SHARE OF THIRD COUNTRY MARKET  
(PERCENT)**



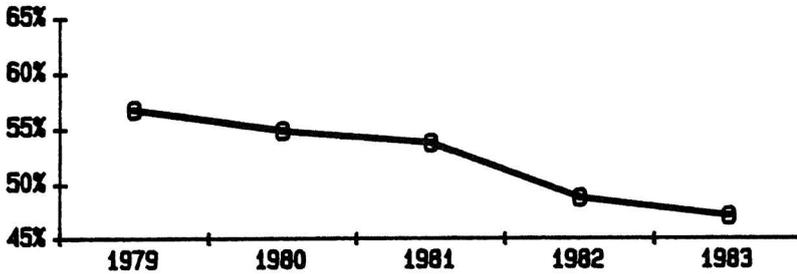
SOURCE: APPENDIX TABLE A.11

**FIGURE 15. EC EGGPLANT TRADE  
1979-83**

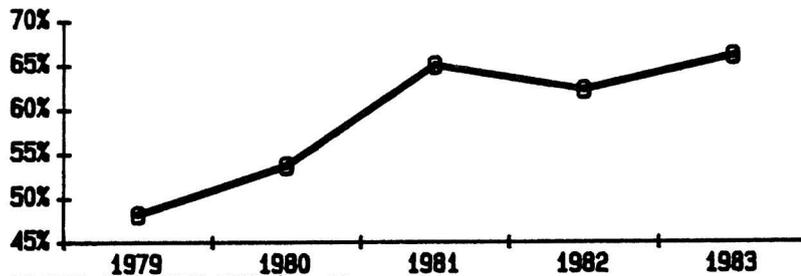
**A. THIRD COUNTRY AND TOTAL  
(1000 METRIC TONS)**



**B. THIRD COUNTRY MARKET SHARE  
(PERCENT)**



**C. SPANISH SHARE OF THIRD COUNTRY MARKET  
(PERCENT)**



SOURCE: APPENDIX TABLE A.12

has increased but third-country trade has been insignificant (Figure 16A). Of the early season trade, third countries account for more than 75 percent of total trade with a slight upward trend in market share (Figure 16B). The Spanish share of third-country trade accounted for about half until 1982 when its share declined to about 43 percent.

EC trade in sweet oranges has trended downward from about 2.1 million metric tons (MMT) in 1974-76 to about 1.9 million metric tons in the early 1980s (Figure 17A). Although third countries dominate trade, their market share has declined from about 95 percent of the market in 1974-76 to around 86 percent of the market in recent years (Figure 17B).

Conclusions This analysis of EC markets found that for eight of the ten products studied, Spain increased the absolute quantities shipped to Community markets and its relative share of the market, whether the external market declined, increased, or remained stable. Of special significance is Spanish dominance of two of the three large volume vegetable markets -- tomatoes and onions. For the two markets where Spain did not increase its share, one (green peas) is very small and the other (green beans) is characterized by intense competition among at least eight developing countries for a market that increased only marginally.

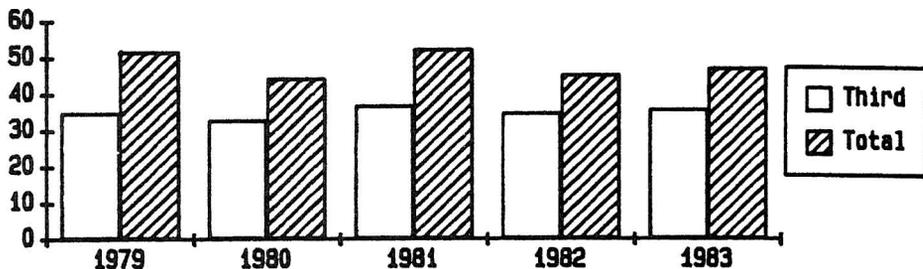
#### The CAP for Horticultural Markets

The mechanism of intervention in horticultural products is similar to the framework described in Section I with such additional refinements as seasonally varying tariffs. These refinements reflect the geographic concentration of production, the perishability of fresh fruits and vegetables, and the storage option provided by processing fresh products. In addition, a number of preferential trade agreements have been reached favoring certain products and certain exporters.

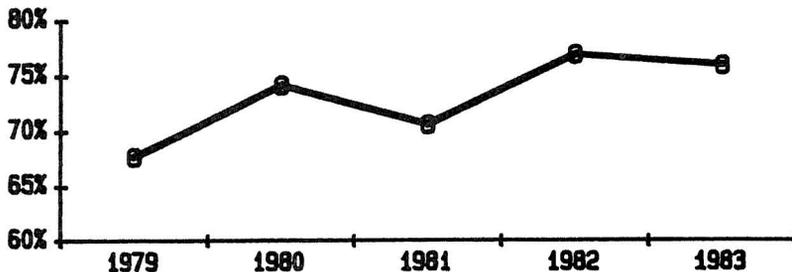
CAP Domestic Policies The target or desired producer price, called the basic price, is used in calculating other official prices. The basic price is based on the three-year moving average of producer prices adjusted for increased producer costs and other political and budgetary factors. The basic prices, set annually by the Community

FIGURE 16. EC GREEN BEAN TRADE  
EARLY SEASON, 1979-83

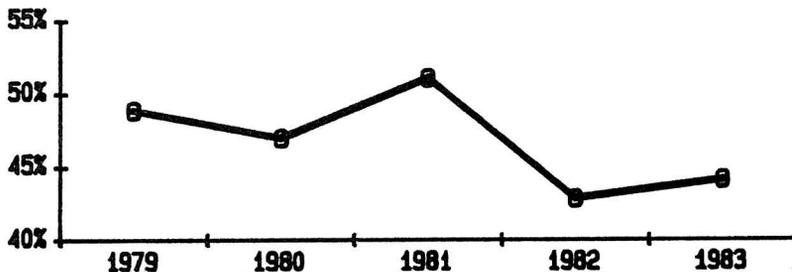
A. THIRD COUNTRY AND TOTAL  
(1000 METRIC TONS)



B. THIRD COUNTRY MARKET SHARE  
(PERCENT)



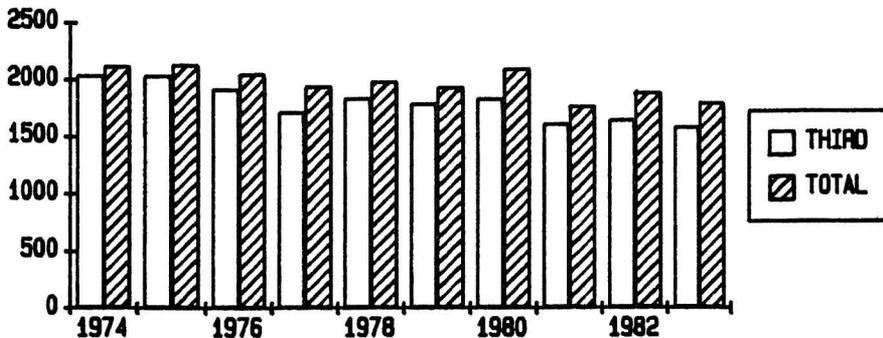
C. SPANISH SHARE OF THIRD COUNTRY MARKET  
(PERCENT)



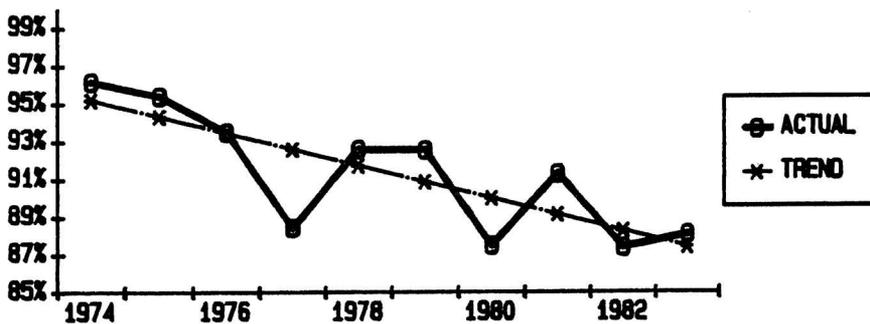
SOURCE: APPENDIX TABLE A.13

**FIGURE 17.EC SWEET ORANGE TRADE  
1974-83**

**A. TOTAL AND THIRD COUNTRY  
(1000 METRIC TONS)**



**B. THIRD COUNTRY MARKET SHARE  
(PERCENT)**



**SOURCE: APPENDIX TABLE A.2**

Council of Ministers, include those products considered to be most important in determining the income of horticultural producers: apples, pears, peaches, sweet oranges, mandarins, lemons, table grapes, tomatoes, eggplant, apricots, and cauliflower. While the basic prices are to reflect past market prices, as a practical matter basic prices have increased rapidly to offset high rates of inflation in France and especially Italy.

To support market prices for domestic production, two official prices trigger different levels of market intervention (purchases). First, the buying-in price, set by the Council for the same group of horticultural products as the basic price, triggers purchases by the member states' national intervention agencies. The buying-in price is calculated as a percentage of the basic price -- 40 to 45 percent for eggplant, cauliflower and tomatoes, 50 to 55 percent for apples and pears, and 60 to 70 percent for other eligible products. In practice, the buying-in price for any product has seldom been reached. The buying-in price serves as an absolute price floor, but the intervention agencies, quite logically, don't want to end up holding large amounts of highly perishable products. To forestall intervention, producers withhold production and divert it to other uses. The buying-in price serves primarily as one component of the price that triggers withholding by producers.

Second, the withdrawal price triggers the withholding of production by producer groups as they buy back their members' unsold produce. The withdrawal price is derived by applying coefficients to the buying-in price and adding 10 percent of the basic price. The coefficients take into account variation in variety, quality, and packaging. The withdrawal price, which applies only during selected periods of Community production and marketing, sets a lower bound or price floor for domestic production unless withholding production cannot effectively moderate a price decline. In that case, the buying-in price serves as the price floor.

The withdrawal price cannot exceed 80 percent of the basic price and can range below 40 percent. It is argued that its function is not to maintain prices at high levels (as is the case with wheat, milk and some other products) but to maintain a floor price for certain products and thus, presumably, maintain farmer incomes at higher levels than they would otherwise be during seasons of excess

production. The effect on price and demand appears to be ambiguous. To the extent that support prices attract new producers or cause existing ones to maintain production, supply to the market will be higher than it would have been otherwise, with a consequent downward pressure on prices and some increase in the amount demanded. On the other hand, to the extent that the withdrawal price provides a floor price during periods of glut, price would be higher than it would have been without the floor price, and the amount demanded would be decreased.

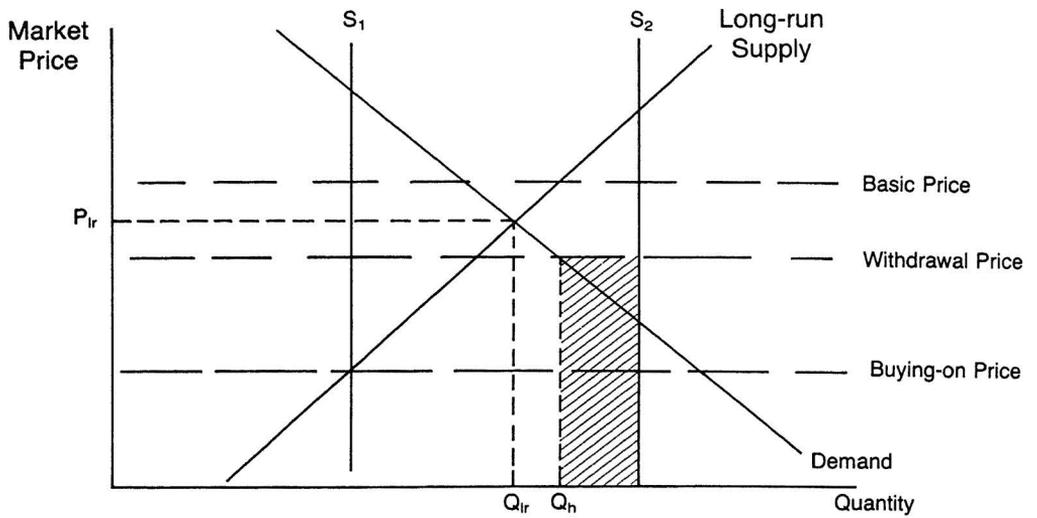
Quality standards are one other administrative instrument used to influence the amount coming on the market and may cause prices to be higher and amount demanded lower than they might have been otherwise. These standards are applied to a wide variety of products, including nine fruits and twenty vegetables. Quality standards, which keep low quality products off the market, encourage production and importation of higher quality products.

In Figure 18, the impact of the CAP system on equilibrium prices and quantities is summarized. The hypothetical long-run supply and demand curves yield a long-run equilibrium price ( $P_{1r}$ ) and quantity ( $Q_{1r}$ ). In this case, the CAP has not affected long-run price and quantity. In the short-run, quantity supplied might vary a good deal from the long-run equilibrium. If due to bad weather the amount marketed is only  $S_1$ , the price would increase to match quantity supplied and demanded. But if short-run supply greatly exceeds quantity demanded at the withdrawal price, then produce is withheld from the market so the effective supply is reduced to  $Q_n$ . The cost of the market intervention is indicated by the shaded rectangle. The same shift in marketings might have been obtained at no cost by tightening quality standards.

Intervention in fresh horticultural markets has been more limited than the Community intervention in many other agricultural markets. Two additional actions by the Community help explain the need for only limited intervention. First, imports from lower-cost producers have been severely limited. Second, subsidies have diverted significant quantities to the processed domestic markets and, with the aid of export subsidies, into third-country markets.

CAP Trade Policies As with the domestic price support, the measures designed to control inputs are limited to a select group of

Figure 18 The CAP for Domestic Production of Horticultural Products



products during varying periods of the year. However, they preclude third-country products from competing with Community producers on the basis of price during periods the system is in operation.

Within the framework of the Common Customs Tariff, ad valorem import duties on all fresh fruits and vegetables are applied to imports from third countries. These import duties are applied throughout the year but can vary by season and by country. In addition, for many fruits and vegetables a minimum import duty based on product weight provides a floor to the ad valorem tax. The Common Customs Tariff (CCT) schedule for tomatoes illustrates the system (Table 4). Tomatoes carry an 11 percent duty from November 1 to May 14 and an 18 percent duty from May 15 to October 31, the main producing season for Community tomatoes. During the November-May period the minimum duty is 2 ECU per 100 kg., while during the May-October period the minimum duty is 3.5 ECU per 100 kg. However, the tariff applied to products of various countries is reduced by agreement between the Community and other countries or groups of countries. It should be noted that minimum tariff rates are reduced to .8 ECU per 100 kg. during the November 1 to May 14 period and 1.4 ECU per 100 kg. during the May 15 to October 31 period.

In addition to the protection Community producers receive from the ad valorem and minimum duties, countervailing duties protect domestic producers of certain fruits and vegetables during their main production periods. This protection is based on a reference price system. The reference price is the minimum price (including the countervailing duty) at which imports from third countries can enter the Community market. It is estimated that 50 to 60 percent of the Community supply of fresh fruits and vegetables is covered by the reference price system: 20 percent for fresh vegetables and 90 percent for fresh fruit. The Commission of the European Community sets the reference prices, determines the period covered by the reference price each year, and establishes the value of any conversion factors. Reference prices are computed on the basis of mean producer prices over the previous three production seasons in the community. This price is then adjusted for increases in production cost. In any event, the price will not be less than the ECU price of the previous year. Table 5 shows the commodities

TABLE 4 TOMATOES, AD VALOREM DUTY (PERCENT)

Period	Spain	Portugal	Egypt	Jordan	Magreb Countries	Turkey	Cyprus	Malta
Nov 1-14						4.4		
Nov 15-30					4.4	4.4	4.4	
Dec 1-31			4.4	4.4	4.4	4.4	4.4	4.4
Jan 1 - Feb 28	5.5	5.5	4.4	4.4	4.4	4.4	4.4	4.4
Mar 1-31			4.4	4.4	4.4	4.4	4.4	4.4
Apr 1-15					4.4	4.4	4.4	4.4
Apr 16-30					4.4	4.4		4.4
May 1-14						4.4		
May 15 - Oct 31						7.2		

Source: CAP Monitor.

TABLE 5 PRODUCTS COVERED BY THE REFERENCE PRICE SYSTEM AND PERIODS OF COVERAGE

	Reference Price Period
<u>Effective</u>	
<u>Fruit</u>	
Apples	July 1 - June 30
Table Grapes	July 11 - November 29
Lemons	June 1 - May 31
Orange hybrids	November - February 28
Sweet Oranges	December 1 - May 31
Peaches	June 11 - September 30
Pears	July 1 - April 30
Cherries	May 21 - August 10
Plums	June 11 - October 20
 <u>Vegetables</u>	
Cucumbers	February 11 - November 30
Tomatoes	April 1 - December 20
Courgettes (zucchini)	April 21 - September 30
Aubergines (eggplant)	June 21 - October 31
 <u>Proposed</u>	
Asparagus	
Sweet Pepper	
Mushrooms	
Onions	
Cauliflower	
Melons	
Green Beans	
Early Carrots	

Source: CAP MONITOR p. 13-05, and Alvensleben, Behr and Jahn.

currently covered by the system and the usual period during which reference prices apply.

When reference prices are in effect, the prices for imported commodities subject to reference prices are reported daily to the Commission. These prices are adjusted by customs duties paid, quality conversion factors, and any applicable countervailing charges to arrive at minimum import prices.

Reference prices vary across the marketing year, reflecting variation of Community production costs. For example, early season imports compete with greenhouse production, which costs more to produce than summer field-grown production. The 1984 reference price (ECU per 100 kilograms) for cucumbers provides a good example of the seasonal variation:

February 11-20	131.12	July	43.68
February 21-29	112.56	August	44.02
March	110.46	September	52.05
April	90.14	October	79.81
May	75.77	November 1-10	79.81
June	58.78		

Another way of providing seasonal support is variation in the quality conversion factors. For example, during 1984 to compute entry price, the prices for imported field-grown cucumbers (after deduction of customs duties) were multiplied by the following conversion factors:

- from 11 February to 30 September: 1.30
- from 1 October to 10 November: 1.00.

Thus, during the February 11 to September 30 period these imported cucumbers could sell in Community markets at a price 23 percent lower than the reference price for Community cucumbers grown under glass.

The market price used to calculate the offer or landed price for an importing country is that of the lowest 30 percent of the quantity imported. If the offer or landed price of a product from that country is .6 ECUs per 100 kg or more below the reference price for two days or three days out of a market period of 5 to 7 days, a countervailing duty (charge) is levied on future imports of that product from that country. Significantly, the countervailing charge is not assessed against the offending shipper. Rather, the countervailing duty is assessed against all subsequent shipments from the country (not just the offending shipper) concerned until the

countervailing duty is removed. The countervailing charge is removed when offer prices from the country concerned equal or exceed the reference price of the product for two consecutive days or when no prices from that country for the product at issue have been received for six days. This method encourages exporting shippers to take careful measures to control exports to the Community through institutions such as producer cooperatives or marketing boards. The reason is that a shipper facing marketing difficulties might -- by selling below the reference price -- inadvertently trigger countervailing charges against subsequent shipments from that country.

Preferential Agreements The Community has entered into a variety of agreements and schemes providing tariff reduction on a variety of commodities. For horticultural products, the important agreements are the Lomé Convention, the bilateral agreements with Israel, Malta and Cyprus, the multi-lateral Magreb and Mashreq agreements, the Association Agreements with Turkey and Greece, and preferential trade agreements with Spain and Portugal. Of the latter three agreements, the one with Greece has been superceded by admission of Greece into the Community and the ones with Spain and Portugal are expected to be obviated when those two countries are admitted to the Community.

Under the Lomé Convention, tariff concessions on horticultural products are provided to 64 African, Caribbean and Pacific (ACP) countries. While there are quotas for certain products such as tomatoes, onions, carrots, and asparagus which are admitted at reduced rates during specified off-peak seasons, many other vegetables such as potatoes, pears, beans, sweet peppers, eggplant, and zucchini are admitted duty free without a limit on the amount. The regime for fresh fruits is less generous, with most temperate fruits not receiving any tariff concessions. Sweet melons and watermelon are admitted duty free as are most, if not all, tropical fruits. Grapefruit and limes have duty-free status, but full duty is paid on lemons. Oranges and mandarins are admitted at reduced rates that vary over a year.

The Community agreements with individual or groups of countries in the Southern Mediterranean area are roughly similar. A somewhat wider variety of fresh horticultural products from the Magreb States

(Algeria, Morocco and Tunisia) receive greater duty reduction than the Mashreq States (Egypt, Syria, Jordan and Lebanon) and Israel, Cyprus and Malta. By and large, however, the same products are provided tariff relief at the same period of time in most of the countries. For example, most of the countries receive relief from part of the duty on sweet peppers, eggplant and zucchini though there are some differences in the time periods among the countries. Again, rate reductions for tomatoes are provided in the same magnitude and for roughly the same time periods to all the countries except Syria, Lebanon, and Israel. Similar rate reductions for avocados are provided to Israel, Algeria and Morocco but not to other countries. For other fruit, all the Southern Mediterranean countries receive some rate reduction for citrus, though there is some variation in rates, varieties and time periods. All countries except Malta receive roughly the same rate reduction for watermelons, though in contrast to the other states, the Mashreq countries are not provided with relief from duty payments on sweet melons.

Virtually no tariff reductions are provided for such fruits as apples, pears, apricots, and cherries. The tariff relief on fresh horticulture as a whole suggests that no Southern Mediterranean country receives any significant competitive advantage over any other in terms of access to Community markets. However, in assessing possible profitability from marketing fresh fruits and vegetables in the Community, it is essential to give full consideration to the tariff structure as it affects individual commodities at various time periods in each country.

The Association Agreement between the Community and Turkey provides that country much greater relief from import duties than any other country, now that Greece has become a member of the Community. Except for some stone fruits during limited time periods, virtually all fresh fruits receive some duty relief from the Community. For vegetables, there are some limited time periods when reduction in tariffs are not available for a very limited number of vegetables (beans, onions, zucchini, and eggplant) but most receive very favorable treatment. Spain and Portugal have preferential trade agreements with the Community but fresh fruit and vegetables receiving duty reduction are quite limited, mainly citrus, grapes, figs, tomatoes, and a number of minor products.

Of the Northern Mediterranean countries only Turkey receives tariff reductions which may provide greater opportunity for profiting from fresh horticulture trade and expansion of that trade in the Community. Of course, when Spain and Portugal are admitted to the Community they will over time be relieved of an import duty or other levies.

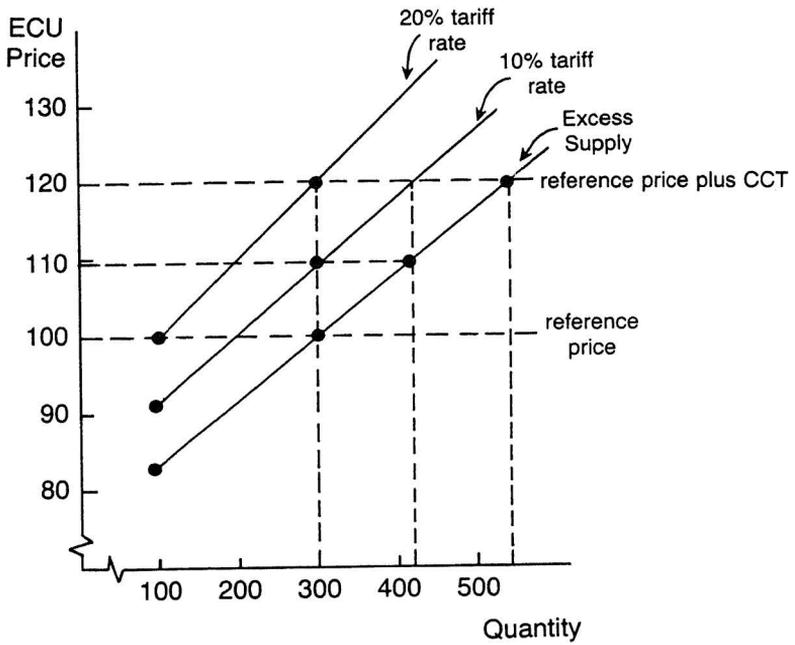
Finally, CAP regulations allow individual member countries and the Community to apply quantitative restrictions (quotas) in case of serious market disruptions. This regulation has been rarely invoked and is not an important part of trade policy.

The reference price system neutralizes any cost advantage that an exporter may hold, and the selective tariff reductions do not decrease the market price from the favored countries. The offer or landed price for produce from an exporter is calculated by deducting the full CCT, not any reduced rate, from the market price observed for that exporter's produce. That calculated offer price is compared with the reference price to determine the countervailing duty (if any). There is no reason to offer produce at any price that will trigger the countervailing duty. The system precludes competition based on lower production costs (price).

A tariff reduction does not provide a price advantage but it can provide higher gross revenues. Harris, Swinbank and Wilkinson provide the following example. They assume a reference price of 100 ECU/100 kg and a CCT rate of 20 percent. If the observed market price for any exporter's produce falls below 120 ECU, countervailing duties would be triggered. An exporter paying the full tariff would pay 20 ECUs tariff and realize a price of 100 ECUs. A second exporter paying a reduced rate would realize a higher price. For example, if this exporter paid a 10 percent tariff (10.9 ECUs), the realized price would be 109.1 ECUs. The system may affect the pattern of trade, but clearly the comparative advantage of low cost exporters is negated by the CAP.

In the example developed by Harris, Swinbank and Wilkinson, the varying tariff rates resulted in differential prices received by two exporters but it did not, presumably, result in a change in quantity imported from either exporter. In Figure 19 the excess supply curve demonstrates the impact of the differential tariff scheme. If the exporter pays no tariff, 540 units would be offered at a market price

Figure 19 Distributional Impact of a Differentiated Tariff



of 120 ECUs. The application of a 10 percent tariff rotates the excess supply curve upward as indicated. The exporter would offer 420 units at the after-tariff price of 109.1 ECUs. If the tariff rate is 20 percent, 300 units are offered at the after-tariff price of 100 ECUs. It seems that an exporter would offer different quantities depending on the tariff rate. Only if excess supply is perfectly inelastic would the differentiated tariff structure not influence quantities imported.

It seems that much of the analysis of the reference price system assumes the competing exporters face perfectly inelastic supplies -- that is, a fixed quantity is offered regardless of price. While that is probably true within a short marketing period, it would certainly not be true across several marketing seasons. And it is in this dynamic context that the CAP differentially impacts countries competing for Community markets.

Figure 20 develops a partial equilibrium analysis of the CAP. First, the generalized external tariff simply rotates the aggregate excess (export) supply of potential suppliers upward. Second, the reference price sets the minimum import price. In combination, these trade barriers result in the excess supply curve indicated. The effective excess supply is perfectly elastic for some quantities and then, at higher quantities, reflects the tariff-adjusted excess supply curve. Clearly, if equilibrium occurs along the perfectly elastic portion of the curve, then non-price factors must allocate imports among the several potential suppliers.

Combining the analysis of the reference price/countervailing duty and tariff scheme with that of the basic/withdrawal price scheme provides a complete picture of the CAP policies for fresh fruits and vegetables. Clearly, after marketing and transport costs are accounted for, economic forces will tend to force equalization of reference prices plus tariff with withdrawal prices. If the withdrawal price greatly exceeds the adjusted reference price, domestic consumption will be satisfied by imports with domestic production purchased by producer groups or intervention agencies.

The CAP for horticultural products is summarized in Figure 21. At various times during the year, produce is withheld from the market, providing a price floor at the producer or farm level. If marketing margins are constant, a price floor is provided at the

Figure 20 Effective Excess Supply Reflecting the CAP for Horticultural Products

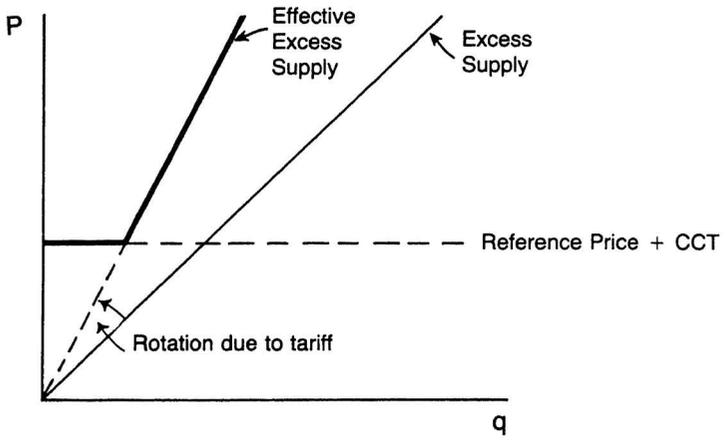
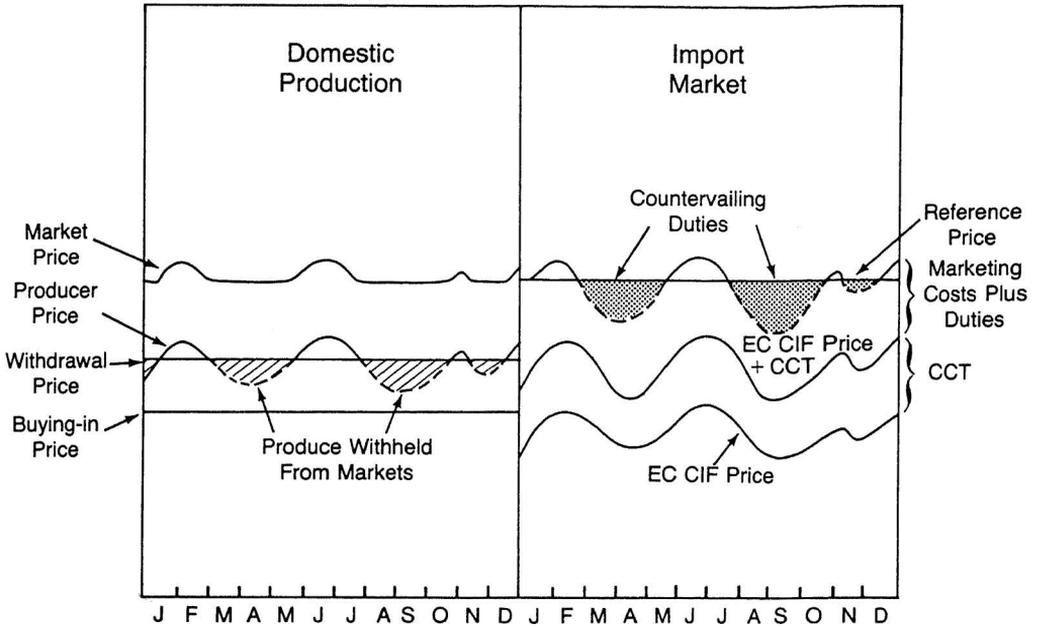


Figure 21 CAP Horticultural Policies



Source: Based on Fruit and Vegetable Exports from the Mediterranean Area to the EC, World Bank Staff Working Paper No. 321, 1979.

wholesale or retail level that parallels the withdrawal price. As the diagram is constructed, the withdrawal price dominates for much of the marketing year. Certainly that need not be the case. The market price for domestic production will be the same market price for imported products and is reproduced in the right hand side of the diagram.

The lower price line in the import market, the EC c.i.f. price, represents the port cost of imports. Over the year it varies with production in the several exporting countries. The delivered price is increased by the Common Custom Tariff as indicated by the second price line. For those periods when that price adjusted for marketing costs falls short of the reference price, the countervailing duty is applied. As the diagram is constructed, the countervailing duties dominate and occur at about the same time that domestic produce is withheld from the market. Clearly, the countervailing duties need not dominate the market price and need not occur simultaneously with the withholding of domestic production.

The budget cost to the Community of the policy measures for fresh horticultural products has been modest but increasing through time. Data do not provide a detailed breakdown of budget costs for the period before 1980, only total costs. The costs are

<u>Year</u>	<u>Expenditures</u> (million ECU)
1972	74.2
1973	42.2
1974	82.2
1975	100.9
1976	258.2
1977	195.4
1978	136.9
1979	145.3
1980*	155.7
1981*	180.9
1982*	305.3
1983*	303.3
1984*	291.0

\*Includes only intervention costs.

Source: Agricultural Situation in the Community.

One of the reasons for the relatively modest budget costs has been the development of an expensive scheme to shift production from the fresh to processed markets. But, at the same time, it should be noted expenditures have been largely accounted for by a few problem products.

Processed Horticultural Products A minimum producer price for selected processed products is enforced by providing processing subsidies to packers who document payment of the minimum producer price. The program includes selected oranges, selected tomato products (juice and paste), peaches, prunes, William pears and cherries. The system seems to have been expanded to include those products where intervention activities in the fresh market have increased. In certain cases, processing subsidies are provided for only a limited quantity, reflecting the need to withdraw products from the fresh market without stimulating further excess production.

The system for processing subsidies is complex, as it differentiates raw products by grade and processed products by type or composition. But a few examples are sufficient to illustrate the program. Moulton reports that minimum price for processing oranges ranged from \$88 to \$154 per metric ton in 1981/82. Processors paying those prices received subsidies ranging from \$44 to \$110 per metric ton. The subsidy reduced the packers' cost of raw product by 71 percent for high quality oranges and 50 percent for lower quality oranges. This type of intervention, of course, may require further measures to protect domestic processors from cheaper imports and to enable them to export to third countries.

Major reliance for protection of the Community market in processed fruits and vegetables is placed on ad valorem duties. For processed vegetables these range from 7 to 20 percent. The range for processed fruits is from 3 to 20 percent, though most are at least 9 percent. Community regulation provides floor prices to establish a minimum price for imports, but this system has never been made effective.

The ad valorem duties are supplemented by two additional measures designed to give added protection to community products. An import certificate is required for tomato concentrate, canned, peeled tomatoes, peaches in syrup, mushrooms (canned for immediate consumption and provisionally preserved in brine), canned pears, peas

and beans in pod, dried prunes, all forms of processed raspberries and frozen and provisionally preserved strawberries. The purpose of the certificate is to enable the Commission to decide if the proposed imports will overload the market. The Commission has 5 days to consider the application, after which a license is issued obligating the proposed import to be made. In practice, imports of processed fruits and vegetables have been stopped only once.

The second supplementary measure is a variable import levy on sugar added to processed fruits. This levy is based on the difference between the world price and the Community price of sugar. This measure protects Community producers against possible loss of markets to third-country producers when the price of Community sugar exceeds the world price.

The Community does provide very selective relief from the Common Customs Tariff on processed horticultural products from some third countries. The ACP countries receive complete exemption for all processed horticultural products except olives. Turkey receives relief on all fruits and vegetables ranging from 60 to 100 percent of the tariff. Tax relief for other Mediterranean countries is quite limited. Morocco is the primary beneficiary of these exemptions, with Spain, Tunisia, Algeria and Israel and the Mashreq countries receiving some relief for 2 to 4 products. Thus, except for Turkey and the ACP countries, the Community maintains fairly rigid constraints on access to the market for processed fruits and vegetables.

Wine The wine support regime includes measures for both internal and external price support. Because the Community is generally a net exporter of wine, the internal support system is very important and also quite complex. The internal support system applies only to table wines, not quality wines. For the purposes of this study, it is not necessary to explore in detail the internal system. The intent of this system is to improve quality and stabilize prices in a market where consumption is declining, domestic production is increasing, and annual production is likely to vary widely. Prices for various wines are set by the Council for Ministers and provide a minimum guaranteed price to producers who participate in storage or distillation programs designed to remove wine from the market. The objective is to provide producers with an

average price which is at least 82 percent of a guide price based on wine prices for the previous two years and the current marketing year.

The external component of the wine marketing regime is composed of a licensing requirement for wine imports, specific duty rates and a reference price supported by a countervailing duty. All imports of wine except for very small amounts require an import license and a security deposit which is forfeited if the wine is not imported. The import duties range from 13.3 ECU per hectoliter for *vin ordinaire* to 40.0 ECU per hectoliter for sparkling wine.

Reference prices are set for table wine, grape juice, grape must, fortified wine, and liquor wine. The reference price is based on the guide price plus the transport costs incurred in taking Community wines to the same place of marketing as imported wines. If the import price of the wine, including import duties, is less than the reference price, then a countervailing duty equal to the price spread between the import price, including duty, and the reference price is assessed against the shipment. In practice, most countries exporting to the Community agree not to market wine at less than the reference price cost; therefore, the countervailing duties are not activated. As with fruits and vegetables, the countervailing duty assures that imported wine cannot compete with domestic wines on the basis of price. As explained earlier, exporters receiving tariff concessions are able to keep a higher proportion of the total price of the wine.

The Community has concluded trade agreements with various Mediterranean countries for wine imports. All imported wines receiving concessions have quotas which limit the amount entering the market at reduced rates and must observe reference prices. The countries receiving import duty concessions are Spain, Portugal, Cyprus, Algeria, Morocco, Tunisia and Yugoslavia. In each instance, the concessions are limited to specific types of wine where importation does not adversely affect Community production.

Olive Oil The marketing regime for olive oil is part of the common organization of the vegetable and oil seeds market. Because the Community is a major importer of all production within this regime except for olive oil, the market is organized to facilitate imports. At the same time it is structured to encourage production

of oilseeds, vegetable oil and vegetable oilcake through the use of subsidies. Production subsidies make it possible for producers to receive prices that encourage production while the products are marketed at or near world prices. Within this context, olive oil, in which the Community is now 95 percent self-sufficient, is supported in a manner which contributes to raising incomes of the poor farmers who grow the olives in Italy, Greece and France.

Because olive oil is in some degree competitive with vegetable oil, the internal price support system was designed to maintain producer prices while keeping market prices competitive with the price of other oils. This is accomplished by subsidizing production through a production aid scheme and subsidizing the market price at a level at which olive oil is considered to be competitive with vegetable oil, a price ratio of about 2.3 to 1. This price is called the Representative Market Price (RMP).

The external support regime for olive oil consists of a Common Customs Tariff plus threshold prices and a variable levy. The threshold price is set to ensure that olive oil imports cannot undercut the representative market price. Variable levies are set weekly in the following way. Bids submitted by traders are evaluated by the Commission on the basis of world market prices and import requirements to determine the level of the variable import levy. If a tender is higher or the same as the levy, the tender is accepted. All imports require a license which requires a security deposit that guarantees the licensed amount will be imported. Thus olive oil is imported at or near world prices, but not in quantities sufficient to affect local producers. Concessional levies are limited by the Community to Algeria, Tunisia, Morocco, Turkey, Lebanon, and Spain. Concessions are made to countries, not individual suppliers, and the country must tax suppliers by an amount equal to the concession in order to receive it. The level of the concession is determined by the Community each year.

Potatoes The Community has not been able to establish a common organization of the market for potatoes. Therefore, there is no internal support regime and external protection is limited to the Common Customs Tariff which varies between 9 and 18 percent. ACP countries are exempted from taxes on potatoes. The only other country to receive concessions on seed and regular potatoes is

Turkey. However, a number of Mediterranean countries do get some concessions from duties on new potatoes: Portugal, Egypt, Magreb countries, Cyprus, Malta, and Turkey.

CAP Horticultural Budget The numerous activities of the Community in horticultural product markets have come to represent a significant portion of the Community agricultural budget (Table 6). Noting only the increasing proportion understates the growth of the horticultural expenditures, as the total budget has grown so rapidly. In 1972, total support expenditures were about 74 million ECU in fruit and vegetable markets, 286 million ECU for olive oil, and 67 million ECU for wine. In 1984, expenditures for fruits and vegetables are estimated to total 1.05 billion ECUs, an increase of over 1300 percent. The estimate for wine is 588 million ECU, an increase of almost 800 percent, and that for olive oil is 573 million ECU, an increase of slightly over 100 percent. From a small fraction of Community support expenditures in the 1970s, these products currently take up about 15 percent.

The growth of the expenditures for fruits and vegetables reflects a fundamental imbalance in some fresh markets that necessitates large expenditures for direct intervention and, more importantly, very large processing subsidies. In 1976, 18.6 million ECUs were paid for processing subsidies. By 1980, processing subsidies had increased to almost 500 million ECUs and to about 700 million ECUs in more recent years. Community processors have become an important source of import needs of third countries. Certainly, the processing subsidies have played an important role in that increase in exports.

TABLE 6 EXPENDITURES TO SUPPORT EC HORTICULTURAL MARKETS<sup>a/</sup>, 1980-84 (Million ECUs)

	1980	1981	1982	1983	1984 <sup>b/</sup>
Olive Oil	317.9	442.7	993.1	676.0	773.0
Fruits & Vegetables	687.3	641.1	914.3	1085.2	1045.0
Refunds:	41.3	42.8	59.5	65.0	66.0
Fresh	39.3	40.9	53.1	58.0	59.0
Processed	1.9	1.9	6.5	7.0	7.0
Intervention:	646.0	598.3	854.8	1020.2	979.0
Fresh	155.7	180.0	305.3	313.0	291.0
Processed	490.3	418.3	549.5	707.2	688.0
Wine	299.5	459.4	570.6	633.9	588.9
Total Horticultural	1304.7	1543.2	1978.0	2395.1	2406.0
All Products	11016.4	10902.8	12092.5	15544.0	16174.9
Percent Horticultural	11.8	14.2	16.4	15.4	14.9

Source: Agricultural Situation in the Community, 1983, p. 262-263.

a/ EAGGF Guaranteed Section Expenditures.

b/ Estimated.

## IV. Prospectus for Third-Country Trade

### Introduction

Enlargement of the Community to include Greece, Spain and Portugal, overwhelmingly favored for political reasons, poses potentially significant adjustments for the agricultural sectors and labor intensive industries (such as textiles) of the current members of the Community and third-country exporters. The entry of Greece and Portugal does not pose serious difficulties, but the entry of Spain "will change the face of Community farming" (Taylor, p. 9).

The difficulties that must be considered are numerous. First, the enlargement will affect the Community's agricultural sector in a dramatic manner. Enlargement will greatly increase Community agricultural production without an equivalent increase in Community purchasing power. Agricultural production will increase by 24 percent, cultivated area by 49 percent and the number of farms by 57 percent, with Spain accounting for the lion's share (Hinton, p. 9). But, because of the relatively lower levels of income and smaller population, Community purchasing power will not greatly increase. For example, Spanish entry will increase the number of consumers by only 13 percent (36 million), and their per capita income level is only half of the Community average (Taylor, p. 9).

Second, enlargement could dramatically reduce Community imports of many products that are very important components of the agricultural exports of Morocco, Algeria, Tunisia, Egypt, Jordan, and Turkey, among others. Imports from these countries would be reduced as the elimination of tariffs on Spanish agricultural products would prompt increased production. Additional supply response from the extension of CAP provisions to the applicant country's agriculture would be expected.

Agricultural Production The increased level of agricultural production is especially significant because the major agricultural products (namely wine, olive oil, and certain fresh fruits and vegetables) of the applicant countries "are already in or bordering on surplus in the Community" (Hinton, p. 2). Hinton speculates that "entry could lead to serious over-production" of these products (p. 9). Within the framework of the CAP discussed earlier, surplus

production leads to increased expenditures through market intervention activities. Of additional concern is that agricultural production of the applicant countries competes with the similar Mediterranean agricultural production of southern France and Italy.

Guth and Aeikens (p. 7) provide the following estimates of self-sufficiency ratios ("before" based on the average for 1975-77):

	<u>Before</u> <u>Enlargement</u>	<u>After</u> <u>Enlargement</u>	<u>Actual</u> <u>1980/81</u>
Cereals	.87	.86	1.03
Sugar	1.13	1.09	1.36
Olive Oil	.88	1.09	--
Wine	.98	1.04	1.02
Citrus Fruit	.51	.89	.44
Tomatoes	.94	.99	--
Potatoes	.99	1.00	1.01

For most products, they estimate that enlargement produces a surplus or moves the Community very near self-sufficiency. Their estimates are somewhat dated, with more recent self-sufficiency ratios being even greater than their projections above. Not indicated in the results is the relative surplus of fats and oils. Spain's current restrictions on imports of vegetable oils will be eliminated upon entry. Without new policy intervention, the demand for olive oil will decline due to the increased use of other vegetable oils. As a result, the difficulty of dealing with the olive oil surplus is understated by the self-sufficiency ratio. Spain, like the Community, imports feed grains (sorghum and maize) and protein meals. On the whole, it can be seen that the pattern of agricultural production and consumption in the applicant nations intensifies Community agricultural imbalances.

The potential contribution of Spanish agriculture to Community supplies is also apparent in the fruit and vegetable sector (Hinton, p. 19). In 1978, Spanish onion production equaled 59 percent of Community production, tomatoes 42 percent, lettuce 44 percent. Cucumber and green bean production equaled about 30 percent of Community production, with the percentage scaling down to about 12 percent for strawberries. Hinton does not provide an evaluation of post-enlargement production, but clearly according free market access to Spain will significantly expand Community supplies, thus placing

pressure on Community producers or on CAP expenditures for market intervention.

Third-Country Trade It must be recognized that while trade with the EC looms large in the trade of the south Mediterranean countries, their trade is a very small part of the Community's trade (see Table 7). With the exception of Jordan, which trades primarily with neighboring Arab countries, exports to the Community account for over a third of each country's total exports. Morocco and Egypt are most dependent, with almost 60 percent and 43 percent of total exports going to the EC. Dependence is even greater on the import side. About one-third of imports come from the EC for all countries except Algeria (65.1 percent) and Morocco (52.4 percent).

For the EC, the trade with the south Mediterranean countries is an extremely small proportion of total trade. The largest participant is Algeria, which accounts for slightly over one percent of EC exports and two percent of EC imports.

The impact of enlargement on third-country trade will depend on (1) supply response in the applicant countries, (2) changes in policy parameters within the current framework, and (3) changes in trade agreements with third countries. Supply response will be determined by the extension of the domestic features of the CAP to the applicant countries and by the elimination of tariffs. Within the current policy framework, changes in reference and withdrawal prices coupled with an extension of seasonal coverage will influence export opportunities for third countries. In addition, the Community has initiated a large scale program to increase the competitiveness of the Italian and French sectors. That program may result in increased supplies from those areas as well.

By and large, impacts on Community agriculture and on third-country trade rest with the policy response -- hence on politics -- of the Community. With the dominance of policy response, economic analysis must be speculative in nature. Moreover, policy changes may change fundamental relations to such an extent that historic relations are not well suited to predict the response to the policy.

TABLE 7 TRADE OF SELECTED SOUTH MEDITERRANEAN COUNTRIES WITH THE EC AS A PERCENT OF TOTAL TRADE AND OF EC TOTAL TRADE, 1978

Country	Proportion of Country Trade		Proportion of EC Trade	
	Exports	Imports	Exports	Imports
Egypt	42.7	38.8	.5	1.1
Algeria	37.3	65.1	1.1	2.1
Morocco	59.0	51.4	.5	.8
Syria	47.8	35.4	.3	.5
Jordan	3.0	34.6	--	.2
Israel	34.2	34.2	N/A	N/A

Source: Taylor, Robert. "Implications for the Southern Mediterranean Countries of the Second Enlargement of the European Community," p. 26.

## Prospectus - A Qualitative Analysis

The growth of demand for fruits and vegetables in the European market is of extreme importance to surplus (and potential surplus) producers of these commodities in the Near East. For most of these surplus producers, Europe represents their largest and most stable market. Thus, the long-term outlook for import demand by the European Community is critical to agricultural planning in the Near East countries.

In basic terms, import (excess) demand is determined by consumer demand and domestic supply. Import demand increases when aggregate demand expands more rapidly than domestic supply. It declines when aggregate demand grows less rapidly than domestic supply. For the European Community, the following qualitative assessment of both aggregate demand and domestic supply strongly suggests that import demand in the foreseeable future will stagnate or, even worse, decline.

Demand Theoretically, if relative consumer prices and consumer tastes remain basically unchanged, growth in aggregate demand is determined by growth in consumer incomes and population. As Table 8 indicates, the population growth rates of Europe are very small. This is a phenomenon of economic development. As nations mature economically, growth in population slows. Very few nations in the world have population growth rates lower than the European Community nations.

On the other hand, the European Community has high per capita incomes but relatively slow income growth. In part, this slow growth rate reflects the already high incomes; that is, substantial absolute change in income is needed to achieve even a small percent change. The slow income growth rate also reflects the mature state of European economies. As nations approach full employment of resources, the opportunities for new economic expansion diminish. Europe's modest growth is not dissimilar to other development economies (USA 2.1 percent, Japan 3.4 percent, Canada 2.6 percent).

Aggregate demand for any product or group of products can increase, despite low population and income growth rates, if the income elasticity is high. It is generally held, however, that income elasticities for food products are relatively low,

**TABLE 8** POPULATION AND INCOMES IN EUROPEAN COUNTRIES

Country	Population (mid 1980)	Population Growth Rate (1970-1980)	GNP Per Capita (1980)	Real Growth Rate (1970-1980)
	(000)	(percent)	(US\$)	(percent)
West Germany	61,561	0.0	12,320	2.7
Italy	56,159	0.5	6,400	2.5
United Kingdom	55,944	0.1	8,520	1.8
France	53,713	0.5	11,200	3.0
Spain	37,430	1.1	5,230	2.6
The Netherlands	14,144	0.8	11,010	2.1
Belgium	9,859	0.2	11,120	2.9
Portugal	9,752	1.2	2,300	1.2
Austria	7,546	0.1	9,360	3.4
Denmark	5,123	0.4	12,010	1.7
Ireland	3,307	1.2	4,930	2.6

Source: World Bank Atlas, 1983.

particularly in more economically advanced economies. As incomes increase from low levels, consumers devote expenditures to food up to the point of food satiation. The satiation level usually comes at fairly modest (mid-income) levels. In the case of European consumers, empirical evidence suggests that income gains will result in relatively small increases in the aggregate demand for fruits and vegetables.

Table 9 presents a summary of estimated income elasticities from a number of sources for fruits and vegetables in the European market. With a very few exceptions, these estimates are less than one. Thus, a one percent increase in income will result in a less than one percent increase in quantity demanded for these products. In the case of potatoes, income elasticities are frequently found to be negative. Thus, income growth can be expected to result in a decrease in the demand for potatoes.

Two exceptions should be noted. First, a recent study by Sarris (1984) estimated the European import demand elasticities directly. His elasticity estimates are considerably higher than those summarized in Table 9. Since Sarris is somewhat vague regarding the assumptions underlying his estimation technique(s), it is difficult to assess the validity of his findings. Further, his analysis focuses on the impacts of EC enlargement on European fruit and vegetables markets, and thus his findings are cast in this context. Even given Sarris' relatively high projected growth rates for the European fruit and vegetable market, he still concludes that EC enlargement will cause increases in net exports of fruit and vegetable products of Spain, Greece and Portugal and that it will slightly reduce net exports of all other exporting regions.

Second, estimates of income elasticities for fruits and vegetables tend to be higher than for many other food products, with the possible exception of meat. Thus, one might argue that an income increase will generally shift the composition of food demand toward fruits and vegetables (and away from, say, cereal-based foods). Such a shift will depend on the elasticities of substitution between fruit and vegetables vis-a-vis all other food and non-food products available.

TABLE 9 SUMMARY OF THE INCOME ELASTICITY FOR FRUITS AND VEGETABLES FOR SELECTED EUROPEAN COUNTRIES

Country		Source	Commodity/Product	Reference Period	Income Elasticity			
Belgium	17	Monning (1975)	Potatoes	1955/56-1971/72	-0.53			
			Vegetables		0.24			
			Citrus fruit		0.68			
Denmark	3	Tewes (1977)	Potatoes	1958-1970	-1.00			
			Tomatoes		0.60			
			Apples	1963/64-1969/70	0.20			
			Pears		1.10			
France	7	Foquet (1975)	Vegetables-fresh	1963-1970	0.31			
			Vegetables-dried		-0.34			
			Vegetables-preserved		1.94			
			All vegetables		0.32			
			Fruits-dried	1959-1969	0.41			
			Fruits-fresh		0.87			
			Jams and preserves		0.64			
			All fruit		0.81			
				17	Monning (1975)	All vegetables	1955/56-1971/72	0.32
						Potatoes		-0.57
			Fresh fruit		0.90			
			Citrus fruit		0.42			
West Germany	17	Monning (1975)	Potatoes	1955/56-1971/72	-0.60			
			Vegetables-fine		0.30			
			Vegetables-coarse		0.20			
			All vegetables		0.40			
			Fresh fruit		0.80			
			Citrus		0.68			

**TABLE 9** SUMMARY OF THE INCOME ELASTICITY FOR FRUITS AND VEGETABLES FOR SELECTED EUROPEAN COUNTRIES  
(cont'd)

Country		Source	Commodity/Product	Reference Period	Income Elasticity
Ireland	41	Schmidt (1977)	Potatoes	1958-1970	-0.36
Italy	53	IRVAM (1975)	Potatoes	1960-1974	-0.18
			Fresh vegetables		0.33
			All vegetables		0.69
			Apples and pears		-0.44
			All fresh fruit		0.67
			Dried fruit		-0.40
	Citrus fruit	1.30			
	50	DiSandro Messo (1972)	Fresh vegetables	1951-1968	0.45
		Monning (1975)	Fresh fruit	1955/56-1971/72	0.79
			Citrus fruit		1.28
		IVRAM (1975)	Olive oil	1960-1974	1.05
				1953-1974	0.92
	(56)	Perone-Pacifico and Picraccini (1974)	1	1953-1972	1.03
The Netherlands		Monning (1975)	All vegetables	1955/56-1971/72	0.32
			Fresh fruit		1.24
			Citrus fruit		0.54

TABLE 9 SUMMARY OF THE INCOME ELASTICITY FOR FRUITS AND VEGETABLES FOR SELECTED EUROPEAN COUNTRIES  
(cont'd)

Country	Source	Commodity/Product	Reference Period	Income Elasticity
United Kingdom	78 Household Food Consumption and Expenditures (1976)	Potatoes	1976 (cross- sectional)	-0.14
		Fresh green vegetables		-0.01
		All other fresh vegetables		0.12
		All processed vegetables		0.01
		Oranges		0.50
		Other citrus		0.99
		Apples		0.39
		All fresh fruit		0.47
		Dried fruit products		0.02
		Frozen fruit products		1.34

Source: Caspori, C., D. MacFaren and G. Habbouse, Supply and Demand Elasticities for Farm Products in the Member Countries of European Community, USDA-IED, ESCS, Washington, DC, January 1980.

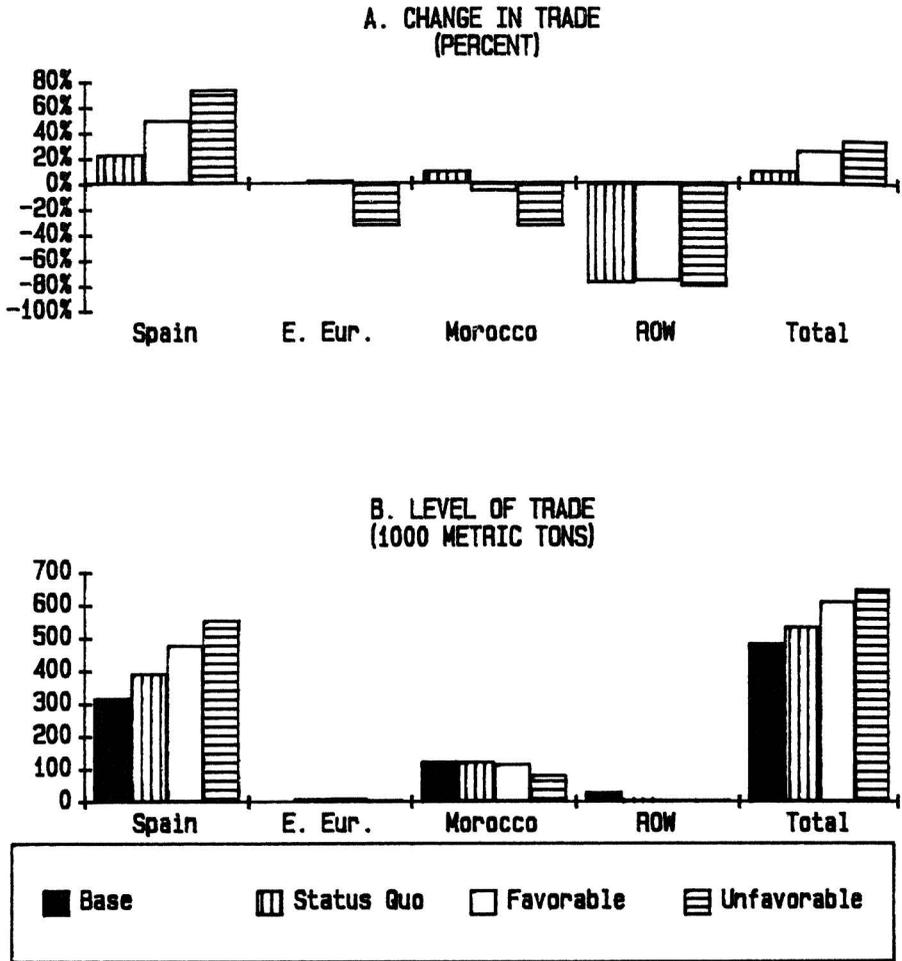
## Quantitative Assessment

The study commissioned by the World Bank and carried out by Alvensleben, Behr and Jahn, all of the Institut für Gartenbauökonomie der Universität Hannover, provides detailed projections of Community imports for a large number of products. We have chosen to report only the most important products and a few additional minor ones to illustrate the study's results. Of several projections for each product, we chose to report only three. The first, termed the status quo, is based on past trends and assumes existing restrictions on Spanish imports are still in place in 1990/91. Second, the scenario most favorable (i.e., having the least impact) for third-country trade is reported. Typically, these results reflect favorable assumptions about supply and demand elasticities. Finally, the least favorable scenario is reported (i.e., the set of assumptions resulting in the greatest reduction of third-country trade). Selecting these three results from the larger, detailed study provides trends and ranges of possible outcomes.

The general pattern of the projected levels of trade of almost all of the fruits and vegetables studied is clearly illustrated by that of tomatoes. With the continuation of past trends (the status quo projection) trade increases by 10.5 percent (over the base year) but Spanish exports increase by over 23 percent (Figure 22A and Appendix Table A.14). And so, the Spanish market share increases to 73.5 percent. At the opposite extreme, the scenario with the largest impact on third countries projects a 34.4 percent gain in total trade. Spanish exports increase by almost three-fourths while Eastern European and Moroccan exports fall by one-third.

In terms of quantities traded, the largest projected level of total trade is slightly over 650 TMT, of which Spain provides over 85 percent (Figure 22B and Appendix Table A.14). For this scenario, Moroccan exports fall from 123 TMT in the base year to 81.9 TMT in 1990/91. Exports of the "rest of the world" (ROW) fall to slightly less than 6 TMT, less than one percent of the market. Of special interest is the fact that imports from Morocco and ROW and their market share fall even under the most favorable assumptions.

FIGURE 22. PROJECTED TOMATO TRADE  
1990/91



SOURCE: APPENDIX TABLE A.14

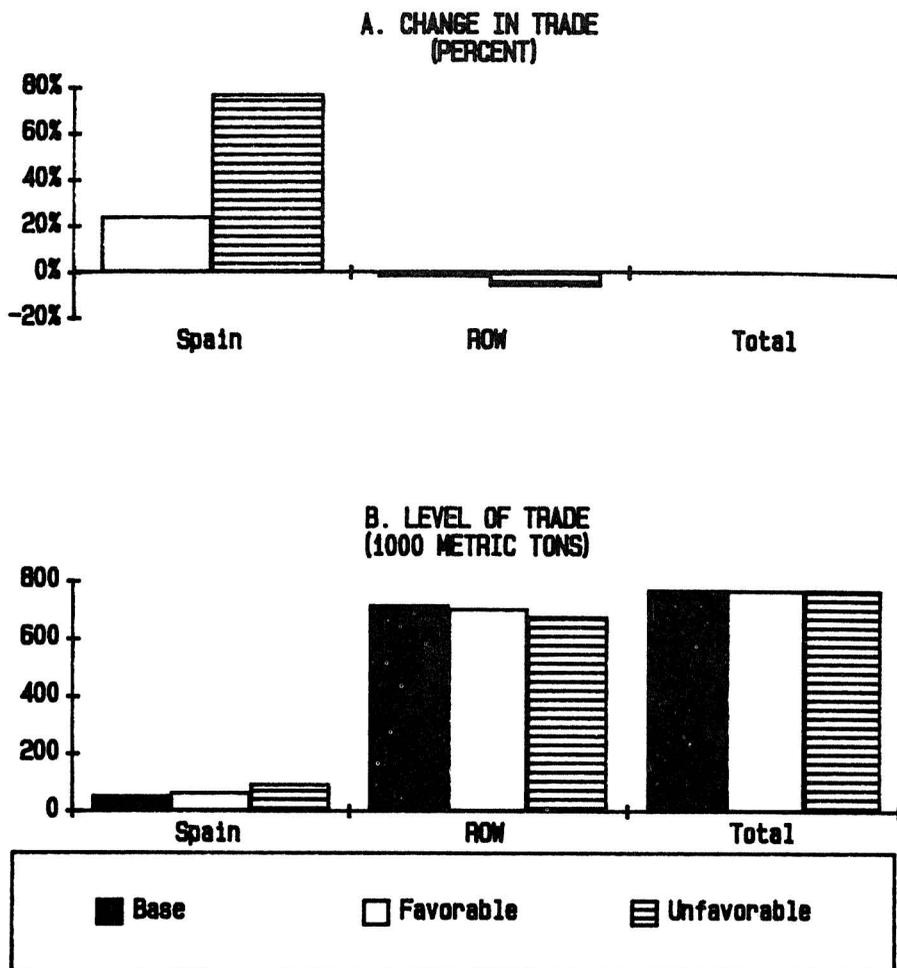
In addition to tomatoes, potatoes have been an important product for third countries. Since Spain has not been an important force in this market, the potential impact of accession to the Community is projected to be rather small. That is the good news. The bad news is that the level of third-country exports has been declining and is projected to continue to decline. The most favorable projection indicates a small decline in third-country trade with Spain only slightly increasing its market share (Figure 23 and Appendix Table A.15). The least favorable projection is a .6 percent decline in third-country trade; Spanish imports would grow by 77 percent and its market share increases to slightly over 12 percent (from 7.5 percent in the base year).

Finally, the remaining vegetables of historical importance to third countries, onions have been and are projected to be dominated by Spain (Figure 24 and Appendix Table A.16). Community imports are projected to increase significantly (from 56 to 86 percent depending on the scenario) with Spain not only meeting the growth in trade but actually increasing its market share. Imports from Eastern Europe, the principal supplier other than Spain, decline by at a minimum of 29 percent and a maximum of 39 percent.

Projections for zucchini (Figure 26 and Appendix Table A.17) and eggplant (Figure 25 and Appendix Table A.18) support further conclusions about the increasing dominance of Spain and the declining importance of other suppliers in the vegetable market. In the case of zucchini, the projection based on past trends is a 21 percent increase in trade and a 30 percent increase in Spanish exports. ROW exports fall by 41 percent. Zucchini trade also indicates the internal difficulties that will face the Community with the accession of Spain.

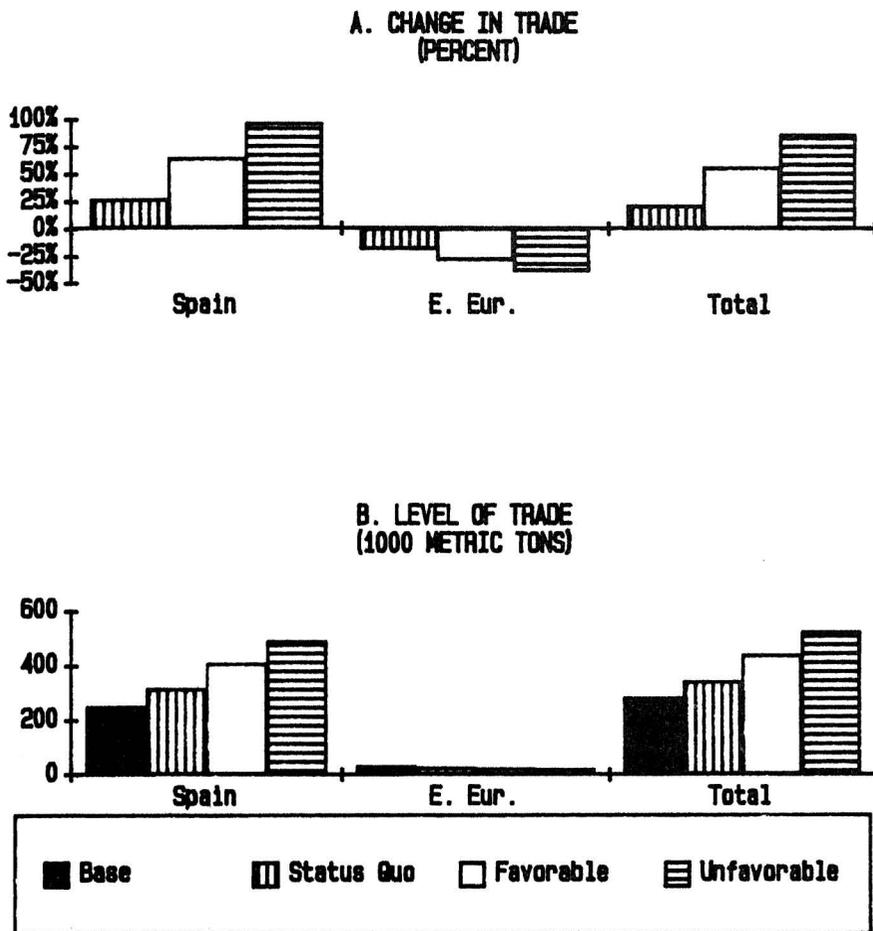
The scenario with the least projected impact on third countries is an increase of 34 percent in trade and of 56 percent in Spanish imports. The Spanish market share increases to almost 90 percent (from 77 percent) at the expense of the Community's largest exporter, Italy, and ROW. Italy's exports fall by almost 23 percent and those of ROW fall to negligible levels. The largest projected impact on third countries gives a 46 percent decline in Italian exports within the Community and ROW is eliminated from the market.

**FIGURE 23. PROJECTED POTATO TRADE  
1990/91**



SOURCE: APPENDIX TABLE A.15

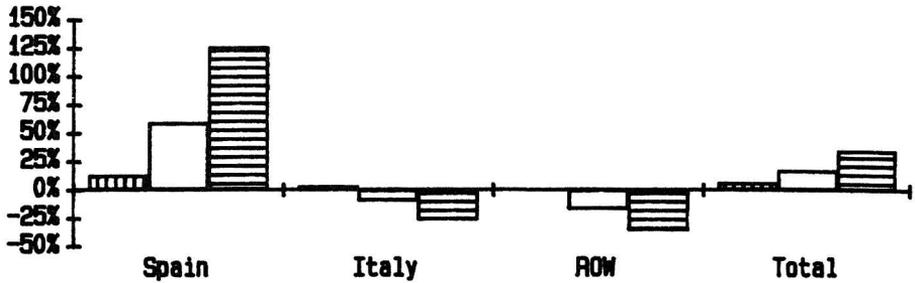
**FIGURE 24. PROJECTED UNION TRADE  
1990/91**



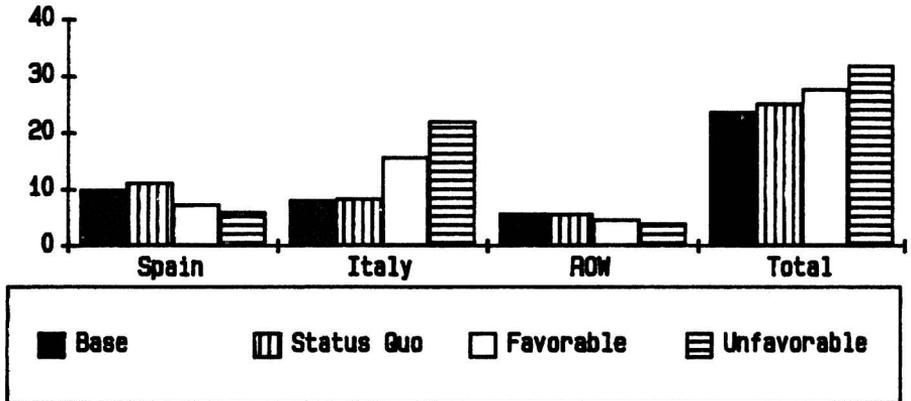
**SOURCE: APPENDIX TABLE A.16**

FIGURE 25. PROJECTED EGGPLANT TRADE  
1990/91

A. CHANGE IN TRADE  
(PERCENT)



B. LEVEL OF TRADE  
(1000 METRIC TONS)



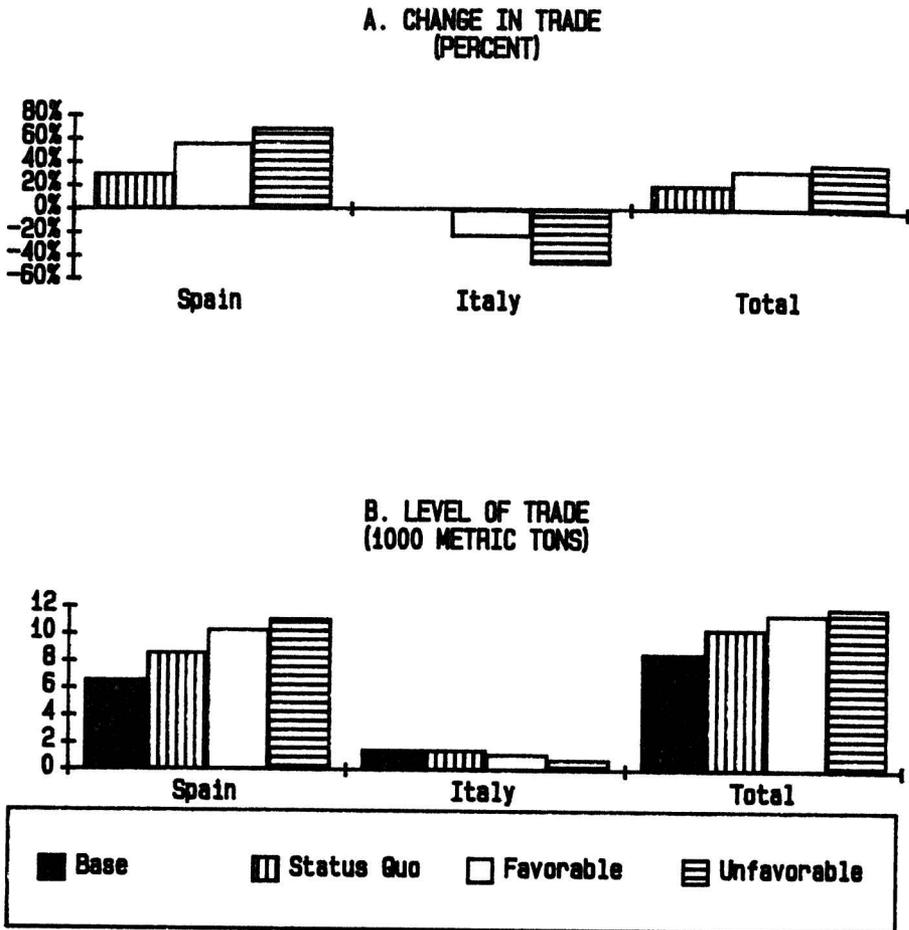
SOURCE: APPENDIX TABLE A.18

Italy and ROW evidently have greater staying power in the eggplant market. According to past trends, although the growth in Spanish exports is twice that of total trade (12.9 versus 6.2 percent), Italy would retain about one-third and ROW about one-fifth of the market (Figure 26 and Appendix Table A.18). The most favorable projection is a 17 percent growth in trade but a 59 percent growth in Spanish exports. Italian exports would fall by almost 10 percent and those of ROW by 17 percent. The least favorable projection is a significantly higher growth in trade (35 percent). But Spanish exports would increase by 125 percent, Italian exports fall by over one-fourth, and ROW exports fall by over one-third. In comparison to the base year, the Spanish market share would increase to 70 percent from less than 42 percent.

For the most important fresh fruit import, sweet oranges, the trend has been a declining level of third-country trade (Figure 27 and Appendix Table A.19). Based on that trend, orange imports are projected to decline 6 percent with Spanish exports falling by 15 percent. Other Mediterranean Country (OMC) exports would fall only slightly, by 3 percent. With the most favorable accession assumptions, total trade falls by 4 percent as do the trade of Spain and OMC. Although this projection shows only a small decline in third-country trade, the least favorable projection shows a dramatic impact on third countries. While trade declines by 7 percent, Spanish exports increase by 23 percent. Compounding the difficulties of third countries is the projected 10 percent increase in Greek exports. The projected market share of OMC falls from 60 to 45 percent.

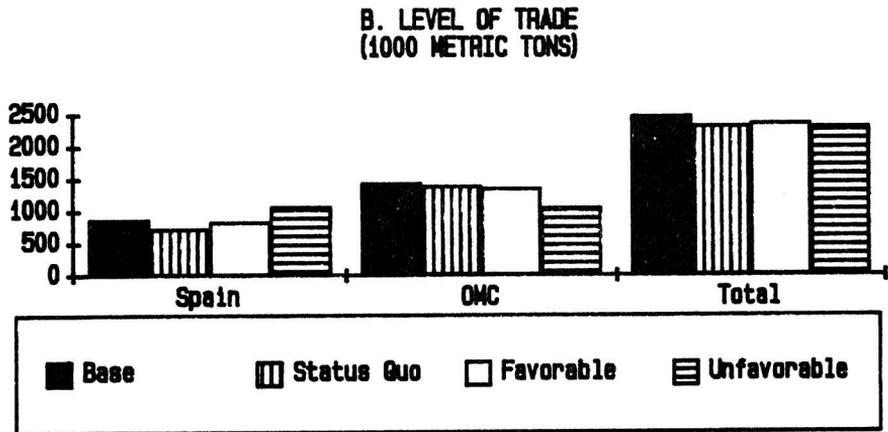
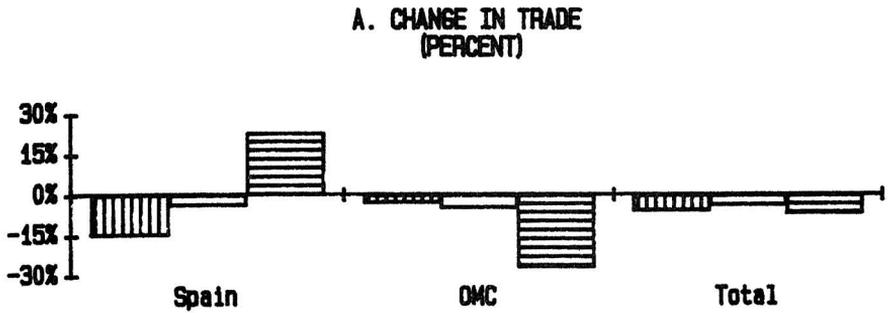
Although dominated by Spain, the Clementine and Mandarin market has been an important source of increasing exports to the Community by third countries. On the basis of past trends, total trade is projected to increase by almost 17 percent, that of Spain by 13.2 percent. OMCs supply much of the increased trade as their exports are projected to increase over 25 percent. Under the most favorable assumptions, trade and Spanish exports increase by slightly over 20 percent. OMCs exports are projected to increase by almost 19 percent. Under the least favorable assumptions, OMC exports fall by 2 percent as total trade increases by 23.5 percent because Spanish exports increase by over 35 percent.

FIGURE 26. PROJECTED ZUCCHINI TRADE  
1990/91



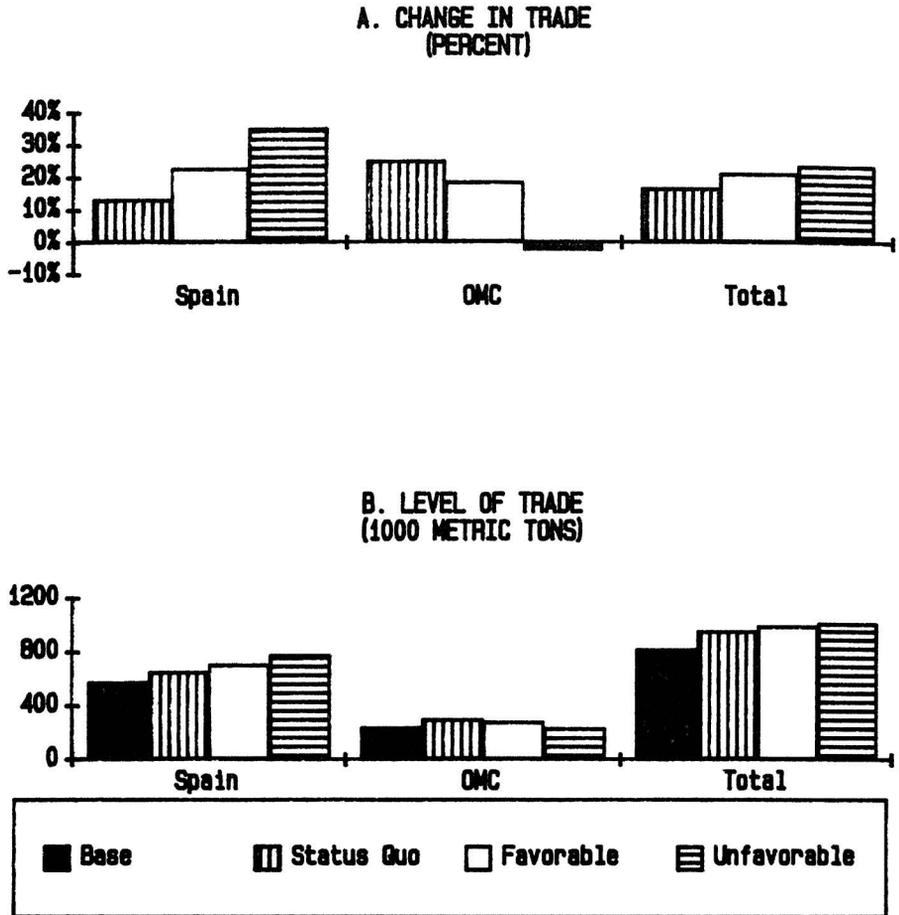
SOURCE: APPENDIX TABLE A.17

**FIGURE 27. PROJECTED SWEET ORANGE TRADE  
1990/91**



SOURCE: APPENDIX TABLE A.19

FIGURE 28. PROJECTED CLEMENTINE TRADE  
1990/91



SOURCE: APPENDIX TABLE A.20

This analysis suggests that Hinton's conclusion that the accession of Spain would "change the face of Community farming" should be extended to include external trade with third countries. The products reviewed here are not an exhaustive list of the Alvensleben, Behr and Jahn study, but the results are those for almost all the products studied. While windows of opportunity exist for a select, few products, the potential for increased exports by third countries to the Community is very limited. And that conclusion holds for most products even if Spain does not join the European Community.

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APPENDIX A  
Data

**TABLE A.1: INTRA-COMMUNITY TRADE AND IMPORTS FROM THIRD COUNTRIES OF SELECTED HORTICULTURAL PRODUCTS, 1974/75-1982/83**

Year	Wine		Fresh Fruit		Fresh Vegetables		Olive Oil	
	Intra	Third Countries	Intra	Third Countries	Intra	Third Countries	Intra	Third Countries
	--(1000 h. liters)--		----(1000 m.t.)----		----(1000 m.t.)----		----(1000 m.t.)----	
1974/75	15205	5304	2641	3815	3528	2232	12.6	204.0
1975/76	17710	4980	2918	4116	3841	2285	8.2	254.7
1976/77	15935	5496	3100	4272	3958	2897	17.6	93.4
1977/78	16205	5872	2989	4477	3901	3270	8.5	51.0
1978/79	21002	6174	3237	4478	4732	3144	12.6	102.4
1979/80	19829	5789	3484	4157	4949	3097	18.0	152.0
1980/81	20960	5450	3919	3916	5037	2788	40.0	169.3
1981/82	22686	5833	4165	4019	5873	2886	31.6	70.5
1982/83							61.1	57.4

Source: 1974/75: The Agricultural Situation in the Community, 1976, p. 226-27.  
 1975/76-76/77: The Agricultural Situation in the Community, 1978, p. 229-30.  
 1977/78-79/80: The Agricultural Situation in the Community, 1981, p. 225-26.  
 1979/80-81/82: The Agricultural Situation in the Community, 1983,  
 Table 28 "Intra-Community Trade Based on Exits," p. 242,  
 Table 29 "Community Imports," p. 243.

Notes: Olive oil reported on a calendar year basis, 1974/75 = 1974, etc.  
 EC-9 prior to 1981/82, EC-10 after.

**TABLE A.2: INTRA-COMMUNITY TRADE AND IMPORTS FROM THIRD COUNTRIES OF SELECTED FRUITS AND VEGETABLES, 1974-1983 (1000 metric tons)**

Year	Tomatoes		Oranges		Potatoes		Lemons	
	Intra	Third Country	Intra	Third Country	Intra	Third Country	Intra	Third Country
1974	335.8	363.7	81.3	2041.3	1151.3	481.0	87.2	109.4
1975	329.3	388.1	98.0	2041.5	1710.9	412.6	126.1	189.2
1976	354.1	352.9	133.2	1927.3	1706.4	1111.0	111.8	225.9
1977	366.8	345.6	225.1	1860.1	1724.0	1050.7	85.8	222.5
1978	365.5	364.2	147.1	1845.3	1836.1	498.4	90.4	245.1
1979	381.0	397.0	144.0	1799.0	2080.4	481.6	98.0	235.0
1980	394.8	391.5	263.0	1843.5	2268.8	454.4	88.3	243.9
1981	411.9	420.7	154.0	1621.9	2477.5	367.4	77.3	242.9
1982	466.9	391.9	238.9	1658.5	2542.2	445.6	63.4	293.3
1983	488.5	403.4	215.2	1596.5	2661.5	436.8	88.2	263.2

Source: 1974: The Agricultural Situation in the Community, 1976, p. 226-27.  
 1975/77: The Agricultural Situation in the Community, 1978, p. 229-30.  
 1977/80: The Agricultural Situation in the Community, 1981, p. 225-26.  
 1979/82: The Agricultural Situation in the Community, 1983,  
 Table 28 "Intra-Community Trade Based on Exits," p. 242,  
 Table 29 "Community Imports," p. 243.

Notes: EC-9 prior to 1981, EC-10 after.

TABLE A.3 EC TRADE IN TOMATOES, BY SOURCE, 1974-83 (1000 metric tons)

Year	Intra		3rd Country		Total Quantity
	Quantity	Share	Quantity	Share	
	(TMT)	(%)	(TMT)	(%)	(TMT)
1974	335.8	48.0	363.7	52.0	699.5
1975	329.3	45.9	388.1	54.1	717.4
1976	354.1	50.1	352.9	49.9	707.0
1977	366.8	51.5	345.6	48.5	712.4
1978	365.5	50.1	364.2	49.9	729.7
1979	381.0	49.0	397.0	51.0	778.0
1980	394.8	50.2	391.5	49.8	786.3
1981	411.9	49.5	420.7	50.5	832.6
1982	466.9	54.4	391.9	45.6	858.8
1983	488.5	54.8	403.4	45.2	891.9

Source: Agricultural Situation in the Community, several issues.

**TABLE A.4** EC TRADE IN TOMATOES, BY SOURCE AND SEASON, 1979-83 (1000 metric tons)

Source	November-May 14					May 15-October 31				
	1979	1980	1981	1982	1983	1979	1980	1981	1982	1983
Spain	125.539	128.446	142.394	147.717	145.676	12.463	26.912	32.173	20.687	25.891
Canary Islands	135.456	124.344	139.533	140.554	143.514	1.473	0.252	0.833	0.881	1.489
Total	260.995	252.790	281.927	288.271	189.190	13.936	27.164	33.006	21.568	27.380
OWE(1)		0.107								0.065
Eastern Europe	6.046	5.944	3.743	3.658	5.118	12.096	13.954	8.526	9.410	15.043
South Med.										
Morocco	89.249	80.183	82.593	63.259	59.600	14.370	9.416	6.071	2.198	4.836
Israel	1.957	1.731	1.147	1.502	0.612	0.709				0.020
Other (2)					0.337					0.004
Total	91.206	81.914	83.740	65.450	60.908	15.079	9.416	6.071	2.198	4.860
Other (3)		0.868	0.803	0.875	0.684		0.262	2.879	0.452	0.114
Third Country	355.859	341.623	370.213	358.254	355.900	41.236	49.896	50.482	33.628	47.462
Intra-Trade	82.103	89.003	96.163	124.199	129.691	298.501	305.482	316.653	343.964	358.844
Total	437.962	430.626	466.376	482.453	485.591	339.737	355.378	367.135	377.592	406.306

Source: NIMEX Trade Data.

- Notes: (1) Other Western Europe.  
 (2) Includes Israel, Jordan, Egypt, Algeria and Tunisia.  
 (3) Includes small amounts from Africa and the Americas.

TABLE A.5 EC TRADE IN POTATOES, BY SOURCE AND SEASON, 1979-83 (1000 metric tons)

Applicants	October-December					January-May 15					May 15-June 30				
	1979	1980	1981	1982	1983	1979	1980	1981	1982	1983	1979	1980	1981	1982	1983
Spain	--	--	1.3	1.3	7.0	30.2	26.7	37.6	56.8	31.1	11.7	31.6	18.8	5.0	14.1
Canary Islands	0.3	0.3	0.3	0.4	0.2	5.1	2.0	3.2	2.6	6.8	--	--	--	1.0	0.1
Portugal	--	--	--	--	--	--	--	--	--	0.05	--	--	--	--	--
Total	0.3	0.3	1.6	1.7	7.2	35.3	28.7	40.8	59.4	37.9	11.7	31.6	18.8	6.0	14.2
OWE	48.7	20.4	21.0	44.5	5.8	--	--	--	--	--	--	--	--	--	--
Eastern Europe	13.3	12.2	3.3	23.1	25.3	--	--	--	--	--	4.1	1.6	--	2.9	3.8
South Med.															
Egypt	--	--	1.1	2.1	--	89.2	116.6	79.9	89.3	65.7	--	--	--	3.0	1.3
Morocco	--	--	--	--	--	27.9	39.7	26.4	20.3	35.4	3.5	0.4	0.4	0.6	2.0
Israel	--	--	--	--	0.3	15.7	0.5	10.6	15.3	8.4	1.3	--	1.5	7.0	0.4
Turkey	--	--	--	--	--	--	--	--	--	--	--	--	--	1.1	0.0
Cyprus	1.5	13.2	1.4	6.6	13.0	67.4	36.7	61.5	48.9	21.7	73.3	89.3	80.1	85.8	111.7
Algeria	--	--	--	--	0.7	2.2	--	--	--	0.8	--	--	--	--	0.4
Tunisia	2.8	0.6	--	--	--	3.3	4.1	2.2	34.	1.1	--	0.4	--	0.3	0.7
Total	4.3	13.8	2.4	8.7	14.0	205.7	197.6	180.7	177.1	133.2	78.1	90.1	82.0	97.7	116.5
Africa															
Ethiopia	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--
Senegal	--	--	--	--	0.02	--	--	--	--	--	--	--	--	--	--
Ivory Coast	--	--	--	--	0.02	--	--	--	--	--	--	--	--	--	--
Total	0.0	0.0	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.0

TABLE A.5 EC TRADE IN POTATOES, BY SOURCE AND SEASON, 1979-83 (1000 metric tons) (continued)

Applicants	October-December					January-May 15					May 15-June 30				
	1979	1980	1981	1982	1983	1979	1980	1981	1982	1983	1979	1980	1981	1982	1983
Americas															
Cuba	--	--	--	--	--	2.8	2.5	1.0	1.0	--	--	--	--	0.8	--
Mexico	--	--	--	--	--	1.2	--	--	--	--	0.7	--	--	--	--
Canada	--	--	--	--	--	--	--	--	--	0.0	--	--	--	--	--
Chile	--	--	--	--	--	--	--	--	--	0.0	--	--	--	--	--
St. Lucia	--	--	--	--	0.01	--	--	--	--	--	--	--	--	--	--
U.S.	--	--	--	--	0.03	--	--	--	--	0.03	--	--	--	--	0.0
Ecuador	--	--	--	--	0.03	--	--	--	--	0.03	--	--	--	--	--
Total	0.0	0.0	0.0	0.0	0.1	3.9	2.5	1.0	1.0	0.1	0.7	0.0	0.8	0.0	0.0
Other															
Malta	--	--	2.4	--	0.0	--	2.5	1.2	0.7	1.5	6.5	4.8	3.8	2.7	2.2
Singapore	--	--	--	--	0.0	--	--	0.9	--	--	--	--	--	--	--
Other	2.4	3.6	--	0.5	0.2	13.9	0.7	2.1	11.0	1.5	6.5	5.8	3.8	2.7	2.2
Total	2.4	3.6	2.4	0.5	0.2	13.9	3.2	2.1	11.0	1.5	6.5	5.8	3.8	2.7	2.2
Third Country	69	50	31	79	53	259	232	225	248	173	101	129	105	109	137
Intra-Trade	1288	1640	1741	1788	1862	83	86	82	75	71	356	262	302	247	275
Total Trade	1357	1690	1772	1866	1915	342	318	306	324	244	457	391	497	356	412

Source: NIMEX Trade Data.

TABLE A.6 EC TRADE IN ONIONS, BY SOURCE, 1979-83, (1000 metric tons)

Source	1979	1980	1981	1982	1983
Spain	189.26	228.12	251.09	208.58	256.09
South Med.					
Israel	18.58	3.69	17.46	17.71	6.35
Egypt	21.13	22.40	12.95	4.14	6.90
Other	1.42	5.32	3.08	1.51	6.68
Total	41.12	31.40	33.49	23.38	19.93
Africa (2)	3.06	5.39	0.00	1.15	1.19
Other					
Australia	1.19	8.52	6.58	7.69	8.27
Other (3)	7.42	7.28	3.10	2.16	1.42
Total	8.61	15.80	9.68	9.84	9.69
Third-Country	317.90	359.20	345.30	312.50	364.40
Intra-Trade	460.80	470.10	464.50	478.50	464.60
Total	778.70	829.30	809.80	791.00	829.00

Source: NIMEX Trade Data.

TABLE A.7 EC TRADE IN CUCUMBERS, BY SOURCE AND SEASON, 1979-83 (1000 metric tons)

Source	November-May 14					May 15-October 31				
	1979	1980	1981	1982	1983	1979	1980	1981	1982	1983
Spain	11.252	13.524	16.181	22.570	21.484	1.227	1.368	2.178	4.178	3.623
Canary Islands	29.127	27.082	25.663	27.204	22.303	2.646	2.412	2.656	1.448	1.526
Total	40.379	40.606	41.844	49.774	43.787	3.873	3.780	4.834	5.626	5.149
Eastern Europe	13.138	2.738	3.729	1.852	5.004	11.277	9.094	9.760	11.987	11.297
Other	0.322	0.419	0.383	0.349	0.184	0.437	0.664	0.794	1.164	0.370
Third Country	53.839	43.763	45.956	51.975	48.975	15.587	13.538	15.388	18.777	16.816
Intra-Trade	114.134	109.652	113.060	129.635	115.450	231.769	226.979	224.738	200.525	213.895
Total	167.973	153.415	159.016	181.610	164.425	247.356	240.517	240.126	219.302	230.711

Source: NIMEX Trade Data.

TABLE A.8 EC TRADE IN GREEN PEAS, BY SOURCE AND SEASON, 1979-83 (1000 metric tons)

Source	September-May 31					June 1-August 31				
	1979	1980	1981	1982	1983	1979	1980	1981	1982	1983
Spain	2.782	2.986	1.853	1.103	3.090					
South Med. Morocco	0.268	0.533	0.387	0.361	0.469					
Total	0.268	0.533	0.601	0.614	0.836					
Other	0.206	0.255	0.138	0.159	0.198					
Third Country	3.256	3.774	2.592	1.876	4.127	0.011	0.084	0.087	0.181	0.032
Intra-Trade	2.406	2.937	2.409	2.568	2.807	6.364	7.306	8.319	11.637	9.674
Total	5.662	6.711	5.001	4.444	6.931	6.375	7.390	8.406	11.818	9.706

Source: NIMEX Trade Data.

TABLE A.9 EC TRADE IN WATERMELON, BY SOURCE, 1980-83 (1000 metric tons)

Source	1980	1981	1982	1983
Spain	57.932	61.914	75.496	88.877
Portugal	0.801	0.826	0.857	0.925
South Med.				
Israel	9.297	10.525	9.348	4.400
Morocco	1.723	0.613		
Egypt	1.405	0.314		0.031
Total	12.425	11.452	9.348	4.431
Africa (1)				0.036
Americas (2)	0.200	0.223	1.083	0.415
Other (3)	1.791	1.388	2.147	2.374
	0.485	0.474	0.531	0.475
Third Country	72.348	74.977	88.074	96.133
Intra-Trade	76.820	83.334	77.670	106.229
Total	149.168	158.311	165.744	202.362

Source: NIMEX Trade Data.

- Notes: (1) Includes Mali, Ghana, Kenya, and South Africa.  
 (2) Includes Jamaica, Colombia, Mexico, Honduras, Brazil, Chile and the United States.  
 (3) Includes Turkey, Cyprus, and Eastern Europe.

TABLE A.10 EC TRADE IN SWEET MELONS, BY SOURCE, 1980-83 (1000 metric tons)

Source	1980	1981	1982	1983
Spain	60.858	70.267	58.294	81.644
Portugal	0.745	0.762	0.648	0.805
Turkey	1.470	1.343	4.270	3.332
South Med.				
Israel	10.979	11.645	9.965	7.714
Other (1)		0.140		0.038
Total	10.979	11.785	9.965	7.752
Africa				
Senegal	0.698	0.598	1.060	1.509
S. Africa	1.930	1.709	1.360	1.752
Other (2)				0.117
Total	2.628	2.307	2.420	3.378
Americas				
Colombia	1.858	1.393	1.091	0.098
Chile	1.251	1.589	1.969	2.038
U.S.	0.149	0.731	0.622	0.631
Other (3)	2.102	0.555	1.519	2.191
Total	5.360	4.268	5.201	4.958
Other (4)	0.424	2.293	9.811	0.406
	0.825	0.830	0.797	0.814
Third Country	81.719	92.263	89.961	101.470
Intra-Trade	17.342	18.961	22.949	23.124
Total	99.061	111.224	112.910	124.594

Source: NIMEX Trade Data.

- Notes: (1) Includes Egypt, Tunisia, Libya and Jordan.  
 (2) Includes Mali, Ivory Coast, Kenya, Nigeria, Ethiopia, Mauritius, Zambia and Zimbabwe.  
 (3) Includes Guatemala, Brazil, Mexico, El Salvador, Ecuador, Peru, Costa Rica, Dominican Republic, Jamaica, Surinam and Argentina.  
 (4) Includes Malta, India and China.

TABLE A.11 EC TRADE IN ZUCCHINI, BY SOURCE, 1979-83 (1000 metric tons)

Source	1979	1980	1981	1982	1983
Spain	24.024	25.406	30.281	28.955	37.206
South Med.					
Israel	0.455	0.097	0.347	0.437	0.056
Morocco	2.586	1.947	1.545	1.108	0.567
Other					0.028
Total	3.041	2.044	1.892	1.543	0.651
Africa (1)	0.618	0.641	0.659	0.599	0.970
Americas (2)		0.179		0.405	0.398
Other (3)	1.307	1.938	1.168	0.777	0.562
Third Country	28.990	29.308	34.000	32.279	39.697
Intra-Trade	11.614	16.240	12.193	12.154	13.554
Total	40.604	45.548	46.193	44.433	53.251

Source: NIMEX Trade Data.

- Notes: (1) Includes Kenya and Togo.  
 (2) Includes Jamaica, Cuba, St. Vincent, Granada, Surinam, and the United States.  
 (3) Includes Turkey, Cyprus, and Eastern Europe.

**TABLE A.12** EC TRADE IN EGGPLANT, BY SOURCE, 1979-83 (1000 metric tons)

Source	1979	1980	1981	1982	1983
Spain	7.171	8.394	10.526	8.226	9.238
Canary Islands	2.146	2.452	2.471	3.052	2.724
South Med.					
Israel	2.432	2.011	2.596	1.259	0.691
Other (1)	0.236	0.193			0.102
Total	2.668	2.204	1.596	1.259	0.793
Africa					
Kenya	0.697	0.788	0.605	0.589	1.034
Other (2)					0.031
Americas					
U.S.	0.254	0.269	0.096		0.082
Guadeloupe	3.528	3.826	3.256	3.734	3.080
Martinique	1.633	1.569	0.622	0.509	0.409
Other (3)	0.001	0.391	0.100	0.100	0.155
Total	5.416	6.046	4.074	4.343	3.726
Other (4)	1.168	2.852	3.218	3.834	3.329
Third Country	19.266	20.284	20.019	18.251	18.142
Intra-Trade	14.682	16.690	17.213	18.923	20.202
Total	33.948	36.974	37.232	37.174	38.344

Source: NIMEX Trade Data.

- Notes: (1) Includes Egypt, Morocco, Libya, and Jordan.  
 (2) Includes Mali, Ivory Coast, Kenya, Senegal, Ethiopia, Uganda, Zambia and South Africa.  
 (3) Includes St. Vincent, Canada, Jamaica, Granada, Surinam and Brazil.  
 (4) Includes Turkey, Cyprus, India and Thailand.

TABLE A.13 EC TRADE IN GREEN BEANS, BY SOURCE AND SEASON, 1979-83 (1000 metric tons)

Source	October-June 30					July 1-September 30				
	1979	1980	1981	1982	1983	1979	1980	1981	1982	1983
Spain	17.057	15.501	18.861	14.988	15.901	0.168	0.144	0.551	0.132	0.265
South Med.										
Egypt	7.347	6.709	5.798	5.891	6.153					
Other	1.994	1.530	0.733	0.502	1.117					0.000
Total	9.341	8.239	6.531	6.393	7.270					0.014
Africa										
Senegal	2.481	3.010	3.429	3.648	3.131					
Kenya	3.124	3.798	4.544	4.868	5.229	0.298	0.455	0.502	0.524	0.788
Upper Volta	1.069	0.829	0.927	1.709	1.989					0.026
Cameroon	0.533	0.511	1.216	1.624	1.357					
Other	0.610	0.762	0.733	1.139	0.426					
Total	7.817	8.910	10.849	12.988	12.132	0.298	0.455	0.502	0.524	0.814
Other	0.748	0.724	0.511	0.601	0.316	0.512	0.548	0.568	0.320	0.237
Third Country	34.963	33.374	36.752	34.970	35.619	0.978	1.147	1.621	0.976	1.330
Intra-Trade	16.691	11.464	15.110	10.545	11.406	14.983	15.394	17.498	24.607	20.015
Total	51.654	44.838	51.862	45.515	47.025	15.961	16.541	19.119	25.583	21.381

Source: NIMEX Trade Data.

TABLE A.14 PROJECTED LEVEL OF TOMATO TRADE, 1990/91

Exporter	Base Year		Status Quo			Favorable			Unfavorable		
	Quantity	Market Share	Quantity	Market Share	Percent Change	Quantity	Market Share	Percent Change	Quantity	Market Share	Percent Change
	(tons)	(%)	(tons)	(%)	(%)	(tons)	(%)	(%)	(tons)	(%)	(%)
Jan-Feb											
Spain	97.6	75.4	128.5	80.1	31.7	136.9	82.6	40.3	139.7	84.1	43.1
Morocco	31.9	24.6	31.9	19.9	0.0	18.9	17.4	-9.4	26.4	15.9	-17.2
Trade	129.5	100.0	160.4	100.0	23.9	165.8	100.0	28.0	166.1	100.0	28.3
March											
Spain	55.0	81.4	70.7	84.9	28.5	80.8	90.3	46.9	85.2	93.7	54.9
Morocco	12.6	18.6	12.6	15.1	0.0	8.7	9.7	-31.0	5.7	6.3	-54.8
Trade	67.6	100.0	83.3	100.0	23.2	89.5	100.0	32.4	90.9	100.0	34.5
April											
Spain	30.9	65.3	36.1	68.8	16.8	46.6	77.5	50.8	55.0	87.0	78.0
E. Eur.	0.8	1.7	0.8	1.5	0.0	0.7	1.2	-12.5	0.5	0.8	-37.5
Morocco	15.6	33.0	15.6	29.7	0.0	12.8	21.3	-17.9	7.7	12.2	-50.6
Trade	47.3	100.0	52.5	100.0	11.0	60.1	100.0	27.1	63.2	100.0	33.6
May 1-14											
Spain	4.5	26.6	2.0	13.9	-55.6	7.1	32.9	57.8	13.7	57.1	204.4
E. Eur.	1.1	6.5	1.1	7.6	0.0	1.4	6.5	27.3	0.9	3.8	-18.2
Morocco	11.3	66.9	11.3	78.5	0.0	13.1	60.6	15.9	9.4	39.2	-16.8
Trade	16.9	100.0	14.4	100.0	-14.8	21.6	100.0	27.8	24.0	100.0	42.0

TABLE A.14 PROJECTED LEVEL OF TOMATO TRADE, 1990/91 (continued)

Exporter	Base Year		Status Quo			Favorable			Unfavorable		
	Quantity	Market Share	Quantity	Market Share	Percent Change	Quantity	Market Share	Percent Change	Quantity	Market Share	Percent Change
	(tons)	(%)	(tons)	(%)	(%)	(tons)	(%)	(%)	(tons)	(%)	(%)
May 15-June 10											
Spain	4.7	16.0	2.3	12.1	-51.1	16.2	41.4	244.7	33.5	76.8	612.8
E. Eur.	2.1	7.2	2.1	11.1	0.0	3.1	7.9	47.6	1.5	3.4	-28.6
Morocco	12.2	41.6	12.2	64.2	0.0	16.9	43.2	38.5	8.6	19.7	-29.5
ROW	10.3	35.2	2.4	12.6	-76.7	2.9	7.4	-71.8	2.0	4.6	-80.6
Trade	29.3	100.0	19.0	100.0	-35.2	39.1	100.0	33.4	43.6	100.0	48.8
June 11-30											
Spain	0.6	2.4	0.5	5.8	-16.7	10.9	60.6	1716.7	23.2	92.4	3766.7
E. Eur.	2.0	8.2	2.0	23.3	0.0	1.8	10.0	-10.0	1.5	6.0	25.0
Morocco	1.8	7.3	1.8	20.9	0.0	1.1	6.1	-38.9	0.4	1.6	-77.8
ROW	20.1	82.0	4.3	50.0	-78.6	4.2	23.3	-79.1	3.9	15.5	-80.6
Trade	24.0	100.0	8.6	100.0	-64.9	18.0	100.0	-26.5	25.1	100.0	2.4
October											
Spain	37.3	94.4	37.7	94.5	1.1	50.4	96.7	35.1	60.4	98.1	61.9
E. Eur.	2.2	5.6	2.2	5.5	0.0	1.7	3.3	-22.7	1.2	1.9	-45.5
Trade	39.5	100.0	39.9	100.0	1.0	52.1	100.0	31.9	61.6	100.0	55.9
November											
Spain	45.0	74.0	59.8	79.1	32.9	64.5	81.1	43.3	70.2	85.5	56.0
E. Eur.	2.9	4.8	2.9	3.8	0.0	2.7	3.4	-6.9	1.9	2.3	-34.5
Morocco	12.9	21.2	12.9	17.1	0.0	12.3	15.5	-4.7	10.0	12.2	-22.5
Trade	60.8	100.0	75.6	100.0	24.3	69.5	100.0	30.8	82.1	100.0	35.0

TABLE A.14 PROJECTED LEVEL OF TOMATO TRADE, 1990/91 (continued)

Exporter	Base Year		Status Quo			Favorable			Unfavorable		
	Quantity	Market Share	Quantity	Market Share	Percent Change	Quantity	Market Share	Percent Change	Quantity	Market Share	Percent Change
	(tons)	(%)	(tons)	(%)	(%)	(tons)	(%)	(%)	(tons)	(%)	(%)
December											
Spain	43.2	63.1	55.7	68.7	28.9	65.1	74.6	50.7	74.1	84.3	71.5
E. Eur.	0.3	0.4	0.3	0.4	0.0	0.3	0.3	0.0	0.1	0.1	-66.7
Morocco	25.0	36.5	25.1	30.9	0.4	21.9	25.1	-12.4	13.7	15.6	-45.2
Trade	68.5	100.0	81.1	100.0	18.4	87.3	100.0	27.4	87.9	100.0	28.3
Annual											
Spain	318.8	65.9	393.3	73.5	23.4	478.5	78.1	50.1	555.0	85.3	74.1
E. Eur.	11.4	2.4	11.4	2.1	0.0	11.7	1.9	2.6	7.6	1.2	-33.3
Morocco	123.3	25.5	123.4	23.1	0.1	115.7	18.9	-6.2	81.9	12.6	-33.6
ROW	30.4	6.3	6.7	1.3	-78.0	7.1	1.2	-76.6	5.9	0.9	-80.6
Trade	483.9	100.0	534.8	100.0	20.5	613.0	100.0	26.7	650.4	99.1	34.4

Source: Alvensleben, Behr and Jahn.

TABLE A.15 PROJECTED LEVEL OF POTATO TRADE, 1990/91

Exporter	Base Year		Favorable			Unfavorable		
	Quantity	Market Share	Quantity	Market Share	Percent Change	Quantity	Market Share	Percent Change
	(tons)	(%)	(tons)	(%)	(%)	(tons)	(%)	(%)
Spain	53.6	7	66.3	9	24	94.8	12	77
ROW	716.4	93	703.7	91	-2	676.6	88	-6
Trade	770.0	100	770.0	100	0	771.4	100	0

Source: Alvensleben, Behr and Jahn.

TABLE A.16 PROJECTED LEVEL OF ONION TRADE, 1990/91

Exporter	Base Year		Status Quo			Favorable			Unfavorable		
	Quantity	Market Share	Quantity	Market Share	Percent Change	Quantity	Market Share	Percent Change	Quantity	Market Share	Percent Change
	(tons)	(%)	(tons)	(%)	(%)	(tons)	(%)	(%)	(tons)	(%)	(%)
Spain	149	88.3	315	92.4	26.5	408	92.9	63.9	489	93.5	96.4
Portugal	2	0.7	1	0.3	-50.0	9	2.1	350.0	15	2.9	650.0
E. Eur.	31	11.0	25	7.3	-19.4	22	5.0	-29.0	19	3.6	-38.7
Trade	282	100.0	314	100.0	20.9	439	100.0	55.7	523	100.0	85.5

Source: Alvensleben, Behr and Jahn.

TABLE A.17 PROJECTED LEVEL OF ZUCCHINI TRADE, 1990/91

Exporter	Base Year		Status Quo			Favorable			Unfavorable		
	Quantity	Market Share	Quantity	Market Share	Percent Change	Quantity	Market Share	Percent Change	Quantity	Market Share	Percent Change
	(tons)	(%)	(tons)	(%)	(%)	(tons)	(%)	(%)	(tons)	(%)	(%)
January											
Italy	608	14.1	608	11.5	0.0	460	7.7	-24.3	315	5.1	-48.2
Spain	3593	83.3	4671	88.2	30.0	5519	92.3	53.6	5900	94.9	64.2
ROW	111	2.6	17	0.3	-84.7		0.0			0.0	
Trade	4312	100.0	5296	100.0	22.8	5979	100.0	38.7	6215	100.0	44.1
February											
Italy	923	21.7	923	18.2	0.0	720	13.1	-22.0	508	8.8	-45.0
ROW	319	7.5	237	4.7	-25.7	29	0.5	-90.9		0.0	
Trade	4247	100.0	5066	100.0	19.3	5503	100.0	29.6	5746	100.0	35.3
Annual Total											
Italy	1531	17.9	1531	14.8	0.0	1180	10.3	-22.9	823	6.9	-46.2
Spain	6598	77.1	8577	82.8	30.0	10273	89.5	55.7	11138	93.1	68.8
ROW	430	5.0	254	2.5	-40.9	29	0.3	-93.3		0.0	
Trade	8559	100.0	10362	100.0	21.1	11482	100.0	34.2	11961	100.0	39.7

Source: Alvensleben, Behr and Jahn.

TABLE A.18 PROJECTED LEVEL OF EGGPLANT TRADE, 1990/91

Exporter	Base Year		Status Quo			Favorable			Unfavorable		
	Quantity	Market Share	Quantity	Market Share	Percent Change	Quantity	Market Share	Percent Change	Quantity	Market Share	Percent Change
	(tons)	(%)	(tons)	(%)	(%)	(tons)	(%)	(%)	(tons)	(%)	(%)
June											
Italy	1344	38.8	1344	39.0	0.0	1110	29.4	-17.4	1090	22.7	-18.9
Spain	1867	53.9	1857	53.9	-0.5	2513	66.6	34.6	3571	74.3	91.3
ROW	255	7.4	246	7.1	-3.5	153	4.1	-40.0	145	3.0	-43.1
Trade	3466	100.0	3447	100.0	-0.5	3776	100.0	8.9	4806	100.0	38.7
July											
Italy	1325	37.1	1325	37.1	0.0	1071	25.0	-19.2	695	12.8	-47.5
Spain	2249	62.9	2249	62.9	0.0	3221	75.0	43.2	4717	87.2	109.7
ROW		0.0		0.0			0.0			0.0	
Trade	3574	100.0	3574	100.0	0.0	4292	100.0	20.1	5412	100.0	51.4
August-October											
Italy	2821	65.3	2821	65.3	0.0	2635	51.5	-6.6	2195	32.0	-22.2
Spain	1500	34.7	1500	34.7	0.0	2481	48.5	65.4	4668	68.0	211.2
ROW		0.0		0.0			0.0			0.0	
Trade	4321	100.0	4321	100.0	0.0	5116	100.0	18.4	6863	100.0	58.8

TABLE A.18 PROJECTED LEVEL OF EGGPLANT TRADE, 1990/91 (continued)

Exporter	Base Year		Status Quo			Favorable			Unfavorable		
	Quantity	Market Share	Quantity	Market Share	Percent Change	Quantity	Market Share	Percent Change	Quantity	Market Share	Percent Change
	(tons)	(%)	(tons)	(%)	(%)	(tons)	(%)	(%)	(tons)	(%)	(%)
November-April											
Italy	2623	21.2	2885	20.8	10.0	2501	17.1	-4.7	1995	13.4	-23.9
Spain	4276	34.6	5559	40.1	30.0	7522	51.5	75.9	9362	62.9	118.9
ROW	5458	44.2	5405	39.0	-1.0	4589	31.4	-15.9	3538	23.8	-35.2
Trade	12357	100.0	13849	100.0	12.1	14612	100.0	18.2	14895	100.0	20.5
Annual Trade											
Italy	8113	34.2	8375	33.2	3.2	7317	26.3	-9.8	5975	18.7	-26.4
Spain	9892	41.7	11165	44.3	12.9	15737	56.6	59.1	22318	69.8	125.6
ROW	5713	24.1	5651	22.4	-1.1	4742	17.1	-17.0	3683	11.5	-35.5
Trade	23718	100.0	25191	100.0	6.2	27796	100.0	17.2	31976	100.0	34.8

Source: Alvensleben, Behr and Jahn.

TABLE A.19 PROJECTED LEVEL OF SWEET ORANGE TRADE, 1990/91

Exporter	Base Year		Status Quo			Favorable			Unfavorable		
	Quantity	Market Share	Quantity	Market Share	Percent Change	Quantity	Market Share	Percent Change	Quantity	Market Share	Percent Change
	(tons)	(%)	(tons)	(%)	(%)	(tons)	(%)	(%)	(tons)	(%)	(%)
October-November											
Spain	158.4	76	157.2	70	-1	151.7	-4	66	189.0	19	80
OMC	42.7	20	55.3	25	30	69.6	63	30	38.8	-9	16
Greece	8.5	4	11.2	5	32	7.8	-8	3	8.4	-1	4
Trade	209.6	100	223.7	100	7	229.1	9	100	236.2	13	100
December-January											
Spain	369.4	41	327.9	35	-11	377.4	2	40	441.5	20	46
OMC	413.6	46	462.6	50	12	441.6	7	47	394.8	-5	41
Greece	124.4	14	136.5	15	10	125.0	0	13	118.8	-5	12
Trade	907.4	100	917.0	100	2	944.0	4	100	955.1	5	100
February-March											
Spain	232.6	30	179.2	25	-23	224.4	-4	31	321.9	38	46
OMC	503.6	65	487.1	68	-3	463.2	-8	63	317.3	-37	46
Greece	38.0	5	50.1	7	32	45.1	19	6	55.3	46	8
Trade	774.2	100	716.4	100	-7	732.7	-5	100	694.5	-10	100
April											
Spain	71.3	23	37.9	15	-47	45.1	-37	18	79.9	12	37
OMC	243.0	77	210.8	84	-13	206.8	-15	82	128.1	-47	60
Greece	0.9	0	1.3	1	44	0.4	-56	0	7.0	678	3
Trade	315.2	100	250.0	100	-21	252.3	-20	100	215.0	-32	100

TABLE A.19 PROJECTED LEVEL OF SWEET ORANGE TRADE, 1990/91 (continued)

Exporter	Base Year		Status Quo			Favorable			Unfavorable		
	Quantity	Market Share	Quantity	Market Share	Percent Change	Quantity	Market Share	Percent Change	Quantity	Market Share	Percent Change
	(tons)	(%)	(tons)	(%)	(%)	(tons)	(%)	(%)	(tons)	(%)	(%)
May 1-15											
Spain	16.3	18	10.8	12	-34	11.0	-33	13	11.9	-27	13
OMC	75.9	82	77.2	88	2	77.0	1	88	26.5	1	87
Greece	0.2	0	0.1	0	-50	0.0	-100	0	0.0	-100	0
Trade	92.4	100	88.0	100	-5	88.0	-5	100	88.4	-4	100
May 16-30											
Spain	16.3	18	10.8	12	-34	11.0	-33	12	11.9	-27	13
OMC	75.9	82	77.1	88	2	77.0	1	87	76.5	1	86
Greece	0.2	0	0.1	0	-50	0.2	0	0	0.2	0	0
Trade	92.4	100	88.0	100	-5	88.2	-5	100	88.6	-4	100
June											
Spain	4.7	6	9.7	34	106	10.4	121	36	11.0	134	37
OMC	75.9	94	18.9	66	-75	18.7	-75	64	18.6	-75	63
Greece	0.0	0	0.1	0		0.0		0	0.0		0
Trade	80.6	100	28.7	100	-64	29.1	-64	100	29.6	-63	100
Annual											
Spain	868.0	35	733.5	32	-15	831.7	-4	35	1068.2	23	46
OMC	1430.6	58	1388.9	60	-3	1353.6	-5	57	1049.9	-27	45
Greece	172.2	7	199.4	9	16	179.3	4	8	189.7	10	8
Trade	2470.8	100	2321.8	100	-6	2364.6	-4	100	2307.8	-7	100

Source: Alvensleben, Behr and Jahn.

TABLE A.20 PROJECTED LEVEL OF MANDARIN AND CLEMENTINE TRADE, 1990/91

Exporter	Base Year		Status Quo			Favorable			Unfavorable		
	Quantity	Market Share	Quantity	Market Share	Percent Change	Quantity	Market Share	Percent Change	Quantity	Market Share	Percent Change
	(tons)	(%)	(tons)	(%)	(%)	(tons)	(%)	(%)	(tons)	(%)	(%)
<b>January</b>											
Greece	0.8	0.5	0.9	0.5	12.5	0.1	.0	-87.5	0.0	0.0	-100.0
Spain	113.7	73.3	143.8	77.6	26.5	154.5	76.8	35.9	173.9	84.2	52.9
OMC	40.6	26.2	20.6	21.9	0.0	46.7	23.2	15.0	32.7	15.8	-19.5
ROW	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Trade	155.1	100.0	185.3	100.0	19.5	201.3	100.0	29.8	206.6	100.0	33.2
<b>February</b>											
Greece	0.4	0.8	0.4	0.7	0.0	0.0	0.0	-100.0	0.0	0.0	-100.0
Spain	42.3	81.2	48.6	83.5	14.9	51.5	81.4	21.7	58.7	88.0	38.8
OMC	7.5	14.4	7.5	12.9	0.0	9.6	15.2	28.0	6.0	9.1	-20.0
ROW	1.9	3.6	1.7	2.9	-10.5	2.2	3.5	15.8	1.4	2.1	-26.3
Trade	52.1	100.0	58.2	100.0	11.7	63.3	100.0	21.5	66.1	100.0	26.9
<b>March</b>											
Greece	0.2	1.2	0.2	0.9	0.0	0.1	0.5	-50.0	0.1	0.4	-50.0
Spain	8.8	52.7	13.2	62.6	50.0	14.8	67.6	68.2	16.4	71.9	86.4
OMC	5.2	31.1	5.2	24.6	0.0	4.7	21.5	-9.6	4.2	18.4	-19.2
ROW	2.5	15.0	2.5	11.8	0.0	2.3	20.5	-8.0	2.1	9.2	-16.0
Trade	16.7	100.0	21.1	100.0	26.3	21.9	100.0	31.1	22.8	100.0	36.5

TABLE A.20 PROJECTED LEVEL OF MANDARIN AND CLEMENTINE TRADE, 1990/91 (continued)

Exporter	Base Year		Status Quo			Favorable			Unfavorable		
	Quantity	Market Share	Quantity	Market Share	Percent Change	Quantity	Market Share	Percent Change	Quantity	Market Share	Percent Change
	(tons)	(%)	(tons)	(%)	(%)	(tons)	(%)	(%)	(tons)	(%)	(%)
November											
Greece	0.5	0.2	0.6	0.2	20.0	0.3	0.1	-40.0	0.0	0.0	-100.0
Spain	230.3	78.4	238.5	73.1	3.6	260.9	77.6	13.3	277.3	81.8	20.4
OMC	62.9	21.4	87.0	26.7	38.3	74.9	22.3	19.1	61.7	18.2	-1.9
ROW	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Trade	293.7	100.0	326.1	100.0	11.0	336.1	100.0	14.4	339.0	100.0	15.4
December											
Greece	0.9	0.3	1.1	0.3	22.2	0.2	0.1	-77.8	0.0	0.0	
Spain	178.9	59.4	205.7	56.5	15.0	223.4	60.4	24.9	248.9	66.1	39.1
OMC	121.5	40.3	157.0	43.2	29.2	146.0	39.5	20.2	127.6	33.9	5.0
ROW	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Trade	301.3	100.0	363.8	100.0	20.7	369.6	100.0	22.7	376.5	100.0	25.0
Annual Total											
Greece	2.8	0.3	3.2	0.3	14.3	0.7	0.1	-75.0	0.1	0.0	
Spain	574.0	70.1	649.8	68.1	13.2	705.1	71.1	22.8	775.2	76.7	35.1
OMC	237.7	29.0	297.3	31.1	25.1	281.9	28.4	18.6	232.2	23.0	-2.3
ROW	4.4	0.5	4.2	0.4	-4.5	4.5	0.5	2.3	3.5	0.3	
Trade	818.9	100.0	954.5	100.0	16.6	992.2	100.0	21.2	1011.0	100.0	23.5



**APPENDIX B**  
**Detailed Description of EC Vegetable Trade**

## Tomatoes

EC International trade in tomatoes during the November 1-May 14 period is increasing marginally at an average rate of about .6 of one percent per annum (Table A.4). At the same time, intra-EC trade increased by about 12 percent per year from 1979 to 1983, with the result that intra-EC trade accounted for about 27 percent of the market in 1983 as compared to only 18 percent in 1979. Consequently, the total volume of extra-EC imports was approximately the same in 1983 as in 1979. During this period, exports from Spain, including the Canary Islands, increased by over 10 percent. As a result of the above changes in the November 1-May 14 market situation, supplies from other external exporters to the EC declined almost 30 percent.

The major supplier of the EC external demand for tomatoes during the off season, excluding Spain and the Canary Islands, is Morocco. However, Moroccan exports to the Community declined at a slightly higher rate than those of other external suppliers. In 1979 Morocco supplied one quarter of all the external exports to the EC, but by 1983 it supplied only one sixth. The only other regular suppliers of tomatoes to the EC are Eastern European countries, which furnish about 1.5 percent of the external market, and Israel, which supplies around .2 percent. In addition, a number of countries in the Americas, Africa, and the Southern Mediterranean areas irregularly supply small amounts of tomatoes to the market. None of them plays a significant role in the market.

The EC import market during the off season was very small, ranging from 11 to 27 thousand tons for external imports from countries other than Spain and the Canary Islands. The total EC May 15-October 31 import market for tomatoes increased by approximately 20 percent from 1979 to 1983. At the same time, intra-EC trade in tomatoes increased by a similar percentage and extra-EC trade by 15 percent. Exports from Spain, including the Canary Islands, increased at a much more rapid rate, by almost 100 percent. Together these developments brought about a significant decline in imports by the EC from external countries other than Spain and the Canary Islands. Imports from other countries declined from 27,175 tons to 19,912 tons, a decrease of almost 30 percent.

In 1979 the principal supplier of tomatoes to the Community was Morocco, which furnished over a third of external imports, slightly more than Spain, including the Canary Islands. However, by 1983 Moroccan exports to the EC had declined sharply, from 14,370 tons to 4,836 tons. By 1983 Morocco was supplying only 10 percent of EC imports, just a little more than one-sixth of the Spain/Canary Island exports to the EC. From 1980 to 1983 Morocco was only the third most important exporter to the EC, having been replaced by Spain and Eastern Europe, which now supplies almost one-third of the Community's imports.

There are no other important suppliers of tomatoes to the Community during this time period. Two Southern Mediterranean countries (Israel and Jordan), two African countries (Kenya and South Africa), and two Americas countries (USA and Canada) irregularly supply very small amounts.

### Potatoes

By weight, the EC international trade in potatoes for human consumption is more than twice as large as that for any of the other crops under consideration (Table A.5). However, it is largely an intra-EC trade, with trade among Community countries accounting for 95 to 98 percent of the total during the five years under consideration. Additionally, the percentage of the trade accounted for by EC country exports is gradually increasing. The remainder of the Community import demand is satisfied almost entirely by imports from other European or Northern Mediterranean countries. Together these countries provided between 91 and 98 percent of external supplies from 1979 to 1983. The amounts provided annually by these countries vary widely, but in combination they completely dominate the external market. No other country is a regular supplier of potatoes for human consumption to the Community. Several countries from Africa, the Southern Mediterranean, and the Americas will sometimes supply potatoes to the EC market, but they are not important factors in that market.

The EC's May 16-June 30 international trade in new potatoes is very large but appeared to be trending downward over the five-year period 1979-1983. Trends are difficult to determine over this

relatively short period of time because of wide annual fluctuations. However, there did appear to be a definite downward trend in intra-EC trade in new potatoes during this period and a consequent increase in imports from outside the Community. Despite the volatility of the market, imports from inside the Community have never reached 1979 levels in subsequent years.

Spain is not a major supplier to the EC import trade. Supplies from Spain are characterized by their great annual variability, reaching a high of over 31 thousand tons in 1980 but falling off to 5 thousand tons in 1982. The major external supplier of new potatoes to the EC external market is Cyprus, which has increased its share from 70 to 80 percent over the 1979-1983 period. Only two other suppliers (Morocco and Malta) have consistently sold in the market during this period, and their volume of exports to the community has been declining. Israel and the Eastern European countries have supplied new potatoes during the May 16-June 30 period four out of the five years, but, again, export volume has been declining. Six other countries (including Egypt and Tunisia) have supplied small amounts on occasions, but they cannot be considered important participants in the market.

The January 1-May 15 international trade in new potatoes by the EC has declined sharply, by more than 25 percent from 1979 to 1983. During this same time period, trade with external countries has declined more rapidly, by 33 percent. Spain, including the Canary Islands, is increasingly important, but not the largest supplier of the external market, averaging in excess of 20 percent of the market over the past three years. Southern Mediterranean countries are, in total, the largest suppliers to the market, with Egypt the largest single supplier. While annual fluctuations complicate the situation, the evidence indicates that Southern Mediterranean countries are not maintaining their share of the market. The trend for the entire area appears to be downward, though exports may spurt upwards in any particular year. For example, Moroccan exports increased by almost 75 percent from 1982 to 1983. Egypt, Morocco, Israel and Tunisia are regular suppliers to the EC market, and Algeria is an occasional supplier. The second most important exporting country is Cyprus, but, again, exports are declining. A few other countries ship small

amounts of new potatoes to the market, but only Cuba and Malta are fairly regular market participants at any appreciable volume.

The major characteristic of the January 1-May 15 new potato market is its volatility. For example, annual percent fluctuations for Egypt during the period were +31 percent, -31 percent, +12 percent, -26 percent. Israel's exports to the Community declined 97 percent between 1979 and 1980, increased by 2,000 percent between 1980 and 1981, increased another 44 percent between 1981 and 1982, and declined by 45 percent from 1982 to 1983. These erratic performances did not distinguish either country from other participants in the market.

### Onions

The EC trade in onions is very large and, if we take annual fluctuations into account, has remained relatively constant over the 1979-1983 period (Table A.6). Market shares are generally in the neighborhood of 55 to 60 percent for intra-EC trade and 40 to 45 percent for extra-EC trade. By far the most important external supplier of onions to the Community is Spain. Spanish exports to the EC have been trending upwards and averaged 69 percent of total external imports in 1982/83 as compared to 60 percent in 1979/80. The remainder of the market is divided among many suppliers. For example, in 1983 there were 29 sellers to the EC market excluding Spain and the Canary Islands. The characteristically large fluctuations in supplies from individual sellers only partially reflect variations in the annual EC demand for external supplies of onions. For example, Egypt was the largest supplier in 1979 and Israel the second largest. Egypt retained its position in 1980 but Israel became one of the smaller regular suppliers as its exports to the EC declined by five-sixths. However, in 1981 and 1982, Israel ranked as the second largest exporter to the Community as exports rose almost five-fold in 1981 and were maintained in 1982. Meanwhile, Egypt's exports dropped nearly 50 percent in 1981 and declined an additional two-thirds in 1982. This dropped Egypt to the seventh ranking in the list of external suppliers, excluding Spain.

From a regional perspective, Eastern Europe appears to be increasing its volume of exports to the EC and, at present, appears

to be the dominant force in the market, excluding, of course, Spain. The Southern Mediterranean and Americas regions are showing some tendency to decline in importance as suppliers. Other areas have maintained export levels reasonably well because of the performance of Australia and New Zealand. The EC market for onions is clearly fiercely competitive, with a large number of suppliers capable of competing actively in the market.

### Cucumbers

With allowances for annual fluctuations, the November 1-May 15 import market for EC countries has remained fairly constant over the 1979 to 1983 period, with 1983 imports 98 percent of 1979 imports (Table A.7). During the same time period, intra-EC imports increased by only 1 percent. The net effect on external exports to the EC was a decrease of 9 percent as imports from external sources averaged around 42 percent of intra-EC imports. The external import market is dominated by Spain and the Canary Islands, which together provided about 90 percent or more of EC external imports from 1980 to 1983. The only other regular supplies of cucumbers are shipped from Eastern European countries. In 1979, Eastern European countries commanded nearly 25 percent of the market but dropped off sharply to about 6 percent. Not until 1983 did Eastern European countries again supply as much as 10 percent to the EC market.

Several countries irregularly supply small amounts of cucumbers to the November 1-May 15 market. Cyprus is most important, providing cucumbers four out of the five years under consideration. However, at no time did its exports of cucumbers exceed .2 percent of extra-EC imports. Table A.7 shows the breakdown of all suppliers to the market, none of whom supplied as much as .1 percent of EC external demand except for Cyprus. During the five-year period the small suppliers taken together supplied an average yearly quantity of 353.8 tons and never supplied as much as one percent of the external demand.

The total Community import trade for cucumbers May 16-October 31 declined slightly during the 1979 to 1983 period, almost 8 percent. The overwhelming bulk of the trade in cucumbers takes place within the community. During the five-year period under consideration,

intra-EC trade in on-season cucumbers averaged 93 percent of total trade. Eastern Europe dominates the external supply market. Typically Eastern European countries have supplied about two-thirds of the external market. The only other regular suppliers of any consequence were Spain and the Canary Islands. Together they supplied annually between 25 percent and 30 percent of external imports. The remainder was supplied irregularly by a number of countries, none of which was a significant factor in the market.

### Green Peas

Community trade in green peas is a low volume trade, ranging from 4,430 tons to 6,931 tons during the 1979 to 1983 period (Table A.8). Green pea trade may be increasing slightly. The 1983 trade was only 3 percent higher than the 1980 trade, though it was more than 20 percent larger than in 1979. It is really not possible to discern any meaningful trend in the amount supplied by external trade, for it increased from 1979 to 1980, declined from 1980 to 1982, and then increased again in 1983. There appears to be a strong correlation between variations in external trade and Spanish exports to the Community. Spain clearly dominates the external trade, supplying between 59 and 85 percent of the external imports during the 1979 to 1983 period. The other two exporters to the EC of some significance are two Southern Mediterranean countries, Morocco and Egypt. During the period under consideration, Morocco provided between 8 and 19 percent of Community external imports. Egypt did not become an important participant in the market until 1981, when it provided 8 percent of the external imports. Egypt's share of the market increased to 11 percent in 1982 but then declined to 6 percent in 1983. The share of Southern Mediterranean suppliers varies inversely with the Spanish share, and it appears they are residual participants in the same marketing cycle as the Spanish.

A few other countries do participate in the market, but they are small and, often, irregular suppliers. These suppliers are widely spread in Western and Eastern Europe, the Americas, the Far East, and Northern Mediterranean areas. Virtually all of the EC import trade in green peas during the June 1-August 31 period is intra-EC trade.

## Watermelon and Sweet Melons

The watermelon market in the EC is increasing in importance, with the export-import trade fairly evenly divided between countries within the Community and external suppliers (Tables A.9 and A.10). Spain is by far the largest external supplier to the EC market, and its share is steadily increasing from 80 percent of the external market in 1980 to 92 percent in 1983. As a result, the amount supplied by other external exporters has declined by 50 percent during the 1980-1983 period. Israel has been the major external supplier, excluding Spain, and its shipments to the EC have declined from over 12 thousand tons to under 4.5 thousand tons. There are no other consistent suppliers of watermelons to the EC market.

The EC import market for sweet melons has been expanding during the four years for which data is available, 1980 to 1983. During this period the market expanded by 25 percent. In 1980 only 17 percent of the imports were furnished by EC countries, but a 33 percent increase in the volume of intra-EC trade increased the intra-EC trade to over 18 percent. Nevertheless, extra-EC exports to the Community increased to 101,470 tons in 1983, a 24 percent increase over the 1980 level. Spain was the major supplier of sweet melons to the external market, averaging 75 percent of the market during the four-year period and ranging from 71 to 80 percent. In addition to Spain, several countries supplied appreciable amounts of sweet melons on a continuing basis. The largest supplier was Israel, though the amount imported from Israel decreased by 30 percent from 1980 to 1983. The next most important supplier was Turkey, whose exports to the Community more than doubled during the four years, reaching a high of 4,270 tons in 1982 and then tailing off to 3,332 tons in 1983.

There were fairly important suppliers in Africa and the Americas. In Africa, Senegal more than doubled its exports to the Community while those from South Africa decreased slightly. Together these two countries supplied approximately 3 percent of the market in the last two years under consideration. Five countries in the Americas supplied meaningful amounts to the EC market in at least three of the four years. These were the USA (which increased its exports to the Community more than fourfold), Guatemala, Colombia,

Brazil and Chile. During the four-year period, exports from these five countries averaged about 5 percent of the extra-EC trade in sweet melons.

A large number of countries supplied smaller amounts of sweet melons, some on an irregular basis. The detailed data for 1983 in Table A.10 show these countries. In addition to Cyprus and other western countries, four Southern Mediterranean, nine African, nine Americas and three countries from other areas of the world furnish sweet melons to the Community market. In 1983 these countries together provided just less than one percent of the market; however, this represented a 78 percent increase in volume over what small suppliers furnished to the market in 1979.

The sweet melon export market of the Community is very active with a large number of producers seeking access to that market. Spain appears to be roughly maintaining its share of an expanding market, with an increasing number of suppliers competing for a share in about one-fifth to one-fourth of the market.

### Zucchini

The EC import trade for zucchini expanded fairly rapidly by about 30 percent from 1979 to 1983 (Table A.11). Nevertheless, it remains a relatively small volume market. During this period, internal trade increased by about 17 percent. However, the most important factor in the market has been the imports from Spain, which have increased much more rapidly than the growth in total imports by EC member countries, 54 percent as compared to 31 percent. Spain now provides three times as much to the foreign trade in zucchini as do members of the Community and over 90 percent of the external exports to the EC.

There are only four other regular external exporters to the EC markets: Cyprus, Israel, Morocco, and Kenya. Exports from the first three countries to the EC have been declining sharply -- Cyprus by over 50 percent, Israel by almost 90 percent and Morocco by almost 80 percent. In contrast, exports from Kenya show an upward trend, with exports in 1983 over 50 percent greater than in 1982.

## Eggplant

The EC country import market has expanded at a rate of about 3 percent per year (Table A.12). At the same time, intra-EC trade in eggplant has increased at a rate of approximately 8.5 percent per annum. As a result, external trade has decreased slightly, with 1983 trade 94 percent of 1979 trade. Spain, including the Canary Islands, has increased its share of the external market, from 50 percent in 1979 to almost 66 percent in 1983. The remainder of the market is shared by a host of countries, but only four contribute significant amounts to the market on a regular basis. These include one Southern Mediterranean country (Israel), one African country (Kenya), and two from the Americas (Guadeloupe and Martinique). Of these four countries, the market shares of Israel and Martinique appear to be decreasing, while Guadeloupe and Kenya appear to be at least holding their own. In addition to the above countries, about 24 other countries provide varying amounts on an irregular basis. The detailed breakdown for 1983 shows the virtually worldwide participation in supplying the EC market. Included are three Southern Mediterranean countries in this group -- Egypt, Jordan and Libya. Other important but irregular suppliers are the United States, St. Vincents, and Cyprus, but none of them has supplied as much as 3 percent of the market in any year.

## Green Beans

The EC international trade in green beans during the October 1-June 30 period declined by some 7 percent between 1979 and 1983, though annual fluctuations are large enough that the market may be remaining roughly constant (Table A.13). During this five-year period, external trade maintained its roughly two-thirds share of total trade. The major external exporter has been Spain, whose exports to the Community average about 45 percent of the extra-EC market and range between 41 and 51 percent.

In 1979 the Southern Mediterranean area was the second most important supplier of green beans to the EC during the off-season. However, in 1980 Africa replaced the Southern Mediterranean as the second most important supplier. Africa maintained this position

during the remainder of the period under consideration, steadily increasing the level of exports through 1982, while Southern Mediterranean exports declined. Egypt has remained the most important individual supplying country other than Spain, though between 1979 and 1983 the annual decrease in Egyptian exports averaged about 4.5 percent. As a result, Egypt, which supplied more than twice as much as its nearest competitor, Kenya, in 1979, provided only 18 percent more by weight in 1983. Morocco, the second and only other important Southern Mediterranean country supplying green beans to the Community, has also seen its exports decline over the five-year period. Moroccan exports to the EC declined by almost 75 percent from 1979 to 1982 but then doubled the next year to increase to about one-half of what they had been in 1979. At the same time Senegal, Upper Volta, Cameroon and Mali have significantly increased their exports to the Community. Competition for the winter green bean market is obviously quite intense, with at least nine external suppliers vying for market shares in a market which is, at best, not increasing in size.

The Community international trade in green beans during the July 1-September 30 period is very much an internal trade. At no time during the five-year period did external exporters supply more than 8 percent of the market. The only two regular suppliers of significant amounts to the green bean market were Spain and Kenya. Spain's exports to the EC varied widely during the period under consideration, but they do not appear to be increasing significantly. On the other hand, Kenya has succeeded in increasing its exports to the Community by more than two and a half times and is the most important external supplier. However, the total external market is very small and, though the market has increased by more than one-third, most of the increase in imports has been supplied by Community members.