

FD-ANJ-851  
ISN 1448

150000100/17

PORTUGAL UNIVERSITY INSTITUTES DEVELOPMENT PROJECT  
(Contract No. AID/NE-C-1701)

Report of

Robert L. Thompson  
Department of Agricultural Economics  
Purdue University  
April 18 - May 23, 1981

**BEST AVAILABLE DOCUMENT**

100-11-10

PORTUGAL TRIP REPORT  
PURDUE UNIVERSITY INSTITUTE DEVELOPMENT PROGRAM

Robert L. Thompson  
Department of Agricultural Economics  
Purdue University

April 18 - May 23, 1981

Introduction

This report covers a five-week assignment as advisor in the agricultural economics area under the Purdue University Institute Development Program. The specific objective of the consultancy was to assist in development of a research program related to the implications of Portugal's accession to the implications of Portugal's accession to the European Community (EC) on regional agricultural adjustments.

The itinerary (outlined below) was developed by Professors John H. Sanders and Antonio Pinheiro of the University of Evora, whose help is gratefully acknowledged. The program involved the following:

1. Interviews with national and regional government personnel, university professors, and other researchers on past and present analyses of the implications of EC accession for Portuguese agriculture.
2. Consultation with university professors on possible EC accession research, as well as more general course-related and professional development issues.
3. Presentation of several seminars in Portuguese.
4. Several field visits to gain first hand knowledge of agricultural production, processing and marketing in Portugal.
5. Accumulation of documents and reports on Portugal's accession to the EC.

Itinerary:

April 18-19: Travel from West Lafayette to Lisbon

April 20-21: Lisbon: Visits to USAID, U.S. Embassy, Gulbenkian Foundation and Ministry of Agriculture

April 22: Travel from Lisbon to Evora  
April 23 -  
May 7: In Evora  
May 8-10: Lisbon: Visits to Gulbenkian Foundation, Banco de Portugal,  
and USAID  
May 10-13: in Evora  
May 13: Travel from Evora to Covilha  
May 14-16: In Covilha  
May 17: Travel from Covilha to Vila Real  
May 18-22: In Vila Real  
May 22: Travel from Vila Real to Lisbon  
May 23: Return from Lisbon to West Lafayette

Summary of Principal Contacts

University of Evora. Departments of Economics and Management

Antonio Pinheiro

Luis Portugal

Maria Leonor S. Carvalho

Antonio Covas

John H. Sanders

Comissão de Coordenação da Região de Alentejo

Lopes Figueireiro

Instituto Universitario de Beira Interior

Reitor Passos Morgado

Marques Mendes

Julian H. Atkinson

Instituto Universitario de Tras-Os-Montes e Alto Douro

María Isolina Poeta

Artur Cristovão

María Manuela Ribeiro

Colaço de Rosario

Francisco Dinis

John Foley

James L. Ahlrichs

Fundação Calouste Gulbenkian

Fernando Estácio

Fernando Brito Soares

Ministry of Agriculture

Armando Sevinate Pinto

Banco de Portugal

Jose Girão

USAID

Donald Finberg

Charles Buchanan

James Black

Jose Luis Almeida Pinheiro

U.S. Embassy

Steven Watkins

Laurie Anne Johnson

Richard McDonnell

Carlos Vieira

### FIELD VISITS

- April 30: Farm visit to cereals growing region east of Beja  
May 19: Visit to Cachão Agro-Industrial Complex  
May 20: Visit to Casa de Douro and portwine producing region

### SEMINARS

- May 6: Evora - "Portuguese Agriculture and EC Integration - Issues and Research"  
May 13: Evora - "Trends in the World Markets for Agricultural Commodities"  
May 14: Covilhã - "Implications of EC Integration for Portuguese Agriculture"  
May 21-22: Vila Real - Two-day Symposium on "Portuguese Accession to the EEC: Implications for the Agricultural Sector" (four presentations)

### IMPLICATIONS OF EC ACCESSION FOR PORTUGUESE AGRICULTURE

In this section of the report are summarized my observations on the likely effects of EC accession on Portuguese agriculture. Implications for research needs are drawn.

#### Existing Studies of EC Accession

Several studies of the likely effects of EC accession were identified and reviewed during the consultancy. These form the basis for the comments which follow. Six studies in this area have been identified:

1. The Ministry of Agriculture's Planning Office has carried out a number of qualitative analyses, including a number on specific commodities, under the leadership of Armando Sevinate Pinto. While not particularly analytical, these studies provide an excellent source of background information on the legal aspects of EC accession.

2. Agraeurope published a special issue in February 1980 on Portugal's EC accession. This is one of the most useful items identified. It contains a very pragmatic analysis of expected adjustments in output levels of the various products.
3. Fundação Calouste Gulbenkian staff members Cortez Lobão, Gomes da Silva and Estácio have done quite a bit of partial equilibrium analysis of the likely changes in effective protection afforded the various commodities after Portugal joins the EC. Using supply and demand elasticity estimates, they are drawing implications for the magnitudes of the likely adjustments.
4. Fernando Brito Soares' Ph.D. thesis at Berkeley developed a mathematical programming model of the agriculture of the coastal region north from Lisbon to the Spanish border. His simulations with the model included an EC accession run. Now at the Gulbenkian Foundation, he is pushing his EC analysis further using a combined econometric-math programming technique used by Christos to analyze Greek accession in another Berkeley thesis.
5. Garry L. Smith's Ph.D. thesis at Purdue examined the likely adjustments in crop production and mixed feed composition in Greece, Spain and Portugal after EC accession. The crop production components of this mathematical programming model drew heavily on the Gulbenkian-World Bank agricultural sector model developed in the early 1970s.
6. Pasquale Scandizzo at the World Bank has recently been using a semi-updated version of the Gulbenkian-World Bank model to do some EC accession simulations. Scandizzo, to date, is unwilling to release his results, so this study has not yet been reviewed by the consultant.

With few exceptions, the studies reviewed focused only on aggregate, national implications of joining the EC, despite the fact that Portugal's

agriculture is extremely heterogeneous. There is a great need to now carry the studies the next step and draw implications for the respective regions' agriculture. We will return to other observations on research needs after synthesizing the implications of the above cited studies.

#### Required Changes in Portugal's Agricultural Policy upon EC Accession

Upon entry into the EC, Portugal's agricultural policy will have to be completely overhauled. Portugal has a cheap food policy, with consumers being able to purchase most products at prices below world market levels as a result of substantial subsidies. Farm prices of many crops are also set below world market prices. Livestock producers enjoy substantial subsidies when they purchase mixed feeds. Feed grains imports are subsidized.

EC food prices, on the other hand, are held well above world market levels due to the policy of raising farm incomes through various price support measures. Imports of feed grains are substantially taxed. Livestock product prices are then supported at a level sufficiently high to offset (or usually more than offset) the higher grain prices they have to pay. These differences suggest that a radical change will have to be effected in Portugal's agricultural policy. This consultant questions whether any Portuguese government can survive the political heat that will be generated by such large increases in food prices.

Specifically, the following changes will have to be made upon joining the EC:

1. Remove agricultural production and consumption subsidies
2. Eliminate direct government price determination and replace it with the EC price intervention mechanism
3. Eliminate government marketing monopolies and replace with open markets in which prices are freely reported

4. Adopt the common external tariffs of the EC and free trade with the other EC members
5. Implement the EC's RICA system of farm accounting which is used in setting the intervention prices.

#### Specific Commodity Analyses

The large changes in relative prices for the respective products will provide the signals for economic agents to adjust the product mix produced and consumed. Most of the analyses carried out to date are partial equilibrium, focusing on only one commodity at a time. The following commodity-by-commodity review synthesizes the results of the studies reviewed. It suffers from the same deficiency as those studies - of taking a myopic view of the likely adjustments in each commodity without taking into account its substitutability with other products.

This analysis is based upon the likely changes in product prices after Portugal joins the EC. Comparisons of price levels are fraught with difficulties, of course, due to the appropriate choice of exchange rate. What are really relevant are the changes in relative product prices and in relative value-added from producing the various commodities.

The following provides a crude comparison of producer prices in Portugal with those in the EC for 1977/78:

<u>Product</u>	<u>Ratio of Producer Price in Portugal to that in EC</u>
Durum Wheat	0.57
Olive Oil	0.66
Rice	0.67
Barley	0.75
Milk	0.75
Soft Wheat	0.84
Corn	0.92
Wine	0.92
Beef	1.46

Portugal's pork prices also tend to be higher than those in the EC, while its egg prices tend to be lower. The higher a product is on this list, the larger will be its relative price increase, and the greater will be the stimulus to expand its production, other things being equal. Fed beef and pork production will be severely hurt since the output prices must fall while input prices must rise, barring any increase in production efficiency or substitution of cereal substitutes for feed grains in compound feeds.

The Agraeurope analysis of EC accession points up how critical the choice of exchange rate is. It showed Portugal's cereals prices in the mid-1970's to be less than those in Germany and Italy, but higher than those in the U.K. and France. This puts in bold perspective how important the decision on the level of Portugal's green escudo rate will be when it negotiates the terms of entry.

We turn now to a discussion of specific commodities. Some basic data on land area, distribution of total agricultural output, and foreign trade by commodity is presented first to provide the reader an overview of Portuguese agriculture to put the comments which follow in context:

Distribution of Total Agricultural Output, 1975

<u>Product</u>	<u>Percent</u>	
Cereals	12.2	
Vegetables	9.7	
Fruit	12.3	
Wine	10.5	
Olive Oil	5.6	
Other Plant Products	<u>14.8</u>	
Plant Subtotal		65.1
Meat	23.4	
Milk	8.4	
Eggs	2.7	
Other Animal Products	<u>0.4</u>	
Animal Subtotal		<u>34.9</u>
TOTAL		100.0

Land Area Planted, 1950

<u>Rank</u>	<u>Crop</u>	<u>1,000 ha.</u>
1.	Maize	370.0
2.	Wheat	340.0
3.	Beans	276.0
4.	Rye	217.0
5.	Oats	184.0
6.	Potatoes	110.0
7.	Barley	72.0
8.	Sunflowers	46.0
9.	Chickpeas	41.0
10.	Almonds	40.5
11.	Rice	34.7
12.	Olives	34.0
13.	Broadbeans	33.0
14.	Tomatoes	17.5
15.	Safflower	6.0
16.	Figs	4.3

---

Data unavailable for oranges, apples, pears, peaches, and sorghum.

Agricultural Trade, 1979

<u>Imports</u>		<u>Exports</u>	
<u>Products</u>	<u>Value</u> (Billion esc.)	<u>Products</u>	<u>Value</u> (Billion esc.)
Corn	13.3	Cork	10.2
Cotton	10.0	Wines & alcohol	10.1
Wheat	6.4	Tomato products	2.7
Skins	3.7	Tripe	0.5
Soybeans	3.4	Fruits and nuts	0.4
Sunflower	3.0	Dairy products	0.4
Sugar	2.8	Olives & olive oil	0.2
Coffee	2.1		
Oilseed Meal	2.0		
Rice	1.9		
Peanuts	1.5		
Beef	1.2		
Mixed feeds	1.0		
Tobacco	1.0		

---

Maize and Other Feed Grains

A larger land area is planted to maize in Portugal than any other commodity, although some downward trend has occurred since the 1960's. Yields are low by international standards and stagnant. Most corn is used as a feed grain, and this demand has grown rapidly as internal demand for livestock and poultry products has grown. Around 60 percent is consumed on the farm where produced. Large imports of corn have occurred, given the subsidies to its use in mixed feeds. Portugal's accession to the EC would further reduce the EC's self-sufficiency in maize, as its imports equal about 10 percent of total EC imports.

Internal Portuguese maize prices would have to rise upon joining the EC and the variable levy would be charged on imports. This should both stimulate larger production and substitution of cheaper energy sources in mixed feeds, such as tapioca chips. The higher mixed feed prices can be expected to stimulate a substitution away from concentrates to forage in dairy and beef production. Since barley prices are expected to rise relatively more than maize prices, and there is a perception that maize has expanded onto land for which it is not well suited, some land may move out of maize into barley production.

To the extent that Portugal continues to import significant quantities of maize, this will impose a balance of payments burden as the variable levy will be paid to FEOGA in Brussels, not to the treasury in Lisbon.

Barley and oat production tend to be concentrated on the poorer soils. Production tends to be variable, and yields are low. Barley should experience a substantial stimulus from adoption of the Common Agricultural Policy, and oats should not experience problems. Portugal produces little sorghum, although around half a million tons per year are now being imported.

This would seem to be a logical crop for Portugal's Mediterranean climate, and its production is now taking hold under similar conditions in Spain.

Overall, feed grains demand is likely to continue its rapid recent growth in Portugal, unless significant amounts of cereal substitutes such as tapioca chips are introduced into the rations after feed grain prices rise. Portugal is likely to significantly increase its imports of feed barley from France upon entry in the E.C. This will generate significant savings to the EC on barley export restitutions.

#### Wheat

Portugal's production of wheat, its second most extensive crop, all goes for human consumption. National average wheat yields are low, and production has trended downwards. Wheat imports, three-quarters of which are from the U.S., are relatively large, but variable. There has been some downward trend in wheat consumption; this should be reinforced by removing the consumption subsidy.

Producer prices of soft wheat are expected to rise relatively more than maize, but less than other crops. The durum wheat price should rise relatively more than most other crops. While durum production is limited to the South, some increase in production is expected. Some soft wheat is grown on marginal land, which may be more suited for barley or oats production. The anticipated changes in relative prices can probably be expected to concentrate wheat on the better soils, with some shift of the poorer soils into other uses.

The EC's high wheat prices have stimulated surplus production, the exports of which are subsidized through export restitutions. Portugal's recent wheat imports are about 10 percent of EC exports, so we should expect to see trade diversion from U.S. to French origin, except for specialized wheats

not available in the E.C. Portugal will have to pay the higher internal EC price. So, in wheat also, Portugal's membership will benefit the EC by reducing the expense of subsidizing exports to third countries.

### Rice

Rice yields in Portugal are comparable to the international standard. Both Portugal and the EC are less than self-sufficient. The consumer price of rice is subsidized in Portugal, and this price will have to rise upon entry. The producer price of rice will likely rise more than for most other crops, so Portugal's production is likely to be stimulated. If Portugal's production can be expanded sufficiently to become a net exporter, there appear to be good prospects for exports to the rest of the expanded EC.

### Olives

Historically Portugal has been a major exporter of olive oil. However, in recent years olive production has been declining due to labor scarcity, such that in some years Portugal is an importer. Olive oil consumption has been declining at a rapid rate in Portugal, as relatively cheaper edible oils have been substituted by consumers.

Under the Common Agricultural Policy, olive producers receive income support through deficiency payments, not price supports. As a result, upon entry both consumers and producers will benefit in Portugal. Producers will receive a higher price, and consumers will pay a lower price. This may slow or halt the decline in consumption and stimulate larger plantings. (There is, of course, a very long lag in olive supply response between planting and actual production.) Nevertheless, Portugal's production is small relative to the rest of the expanded EC.

### Other Oilseeds and Products

Portugal's other two principal oilseeds are safflower and sunflower, with production of the latter growing rapidly. Portugal imports significant amounts of soybeans, sunflowerseed, and peanuts. Oilseed meal consumption has been growing rapidly as mixed feed use has risen. Other oilseed production in Portugal is unlikely to be stimulated by EC accession, so Portugal's membership will likely increase the EC deficit in oilseed meals.

### Tomatoes

The growth of the processing tomato industry has been one of the great success stories of Portuguese agriculture of the last several decades. Portugal is now one of the world's leading exporters of tomato paste. The EC and USSR are the principal export markets. Prices of tomato concentrate are supported in the EC via intervention and storage, import levies, and export refunds. Italy, Greece, and Spain are three of the other largest exporters of tomato concentrate, and in all the countries, the product is an important source of employment and foreign exchange revenue. Once all are EC members, the EC will have significant surplus production, so some policy change is likely to be required. This will be a sensitive political issue to Italy as well as to the three applicants.

### Other Fruits and Vegetables

Portugal is basically self-sufficient in and exports little fruits and vegetables. Because it has similar growing conditions for out-of-season products and a greater distance to high-income population centers than the other Mediterranean countries, Portugal is likely to benefit little from membership in these crops.

Portugal is usually a net importer of potatoes, and, given its low yields, it is unlikely to change production significantly.

#### Wine and Alcohol

Wine and alcohol exports, particularly of red table wines and port wine, are Portugal's largest agricultural export earners. Conflicting reports were received on the effects of EC accession on this industry. While the price comparison presented above suggests that Portuguese producer prices are slightly lower than those in the EC, most industry representatives argued that the EC intervention price is substantially below production costs in Portugal. This inconsistency probably reflects the heterogeneity of the products and of the production conditions. Alentejo grapes, for example, are reported to give a higher alcohol content and are easier to mechanize due to smoother topography and larger field size. In the North, where many plantings are old and the topography impedes mechanization, production costs are much higher. This region, of necessity, will have to emphasize the highest quality wines. With improved technology and higher yields, Portugal should benefit from EC accession. Nevertheless, the EC already has a periodic surplus of low quality wines, and accession of Greece, Spain, and Portugal will increase its production by one-third.

#### Sugar

Portugal has no domestic production except in the Azores, since sugar production was reserved for Portugal's colonies. Since the colonies became independent in 1974, Portuguese consumers have bought sugar at the world market price. The EC market is in chronic surplus due to its sugar price supports, and exports have to be subsidized. Portugal's imports now equal about 10 percent of EC exports, so the EC Commission would welcome Portugal's

membership on this score. Sugar is an important issue, nevertheless, in Portugal's EC membership negotiations since each member receives a production quota. If Portugal receives no quota because it now has no industry, it would be very difficult to ever establish an industry in the future once inside the E.C.

### Beef and Veal

Portuguese producers receive a guaranteed price which is well above that in the EC. The consumer price is then subsidized, with a legal ceiling imposed on prices at retail. This level is well below that paid by consumers in the EC. Beef and veal production have been growing in Portugal for the last two decades, but consumption has grown faster, the difference being made up by imports. Given the subsidized feed grain prices in mixed feeds, there has been rapid growth in beef feeding, with little attention to pasture improvement.

Upon entry to the EC, Portuguese consumers will lose their subsidy, producers will lose their input subsidy, and the output price will fall. Profit margins will be squeezed on both counts. Unless feed conversion rates increase substantially, a significant reduction in feeding and increased reliance on forages in beef production are the expected results. Some decline in beef production is likely. Whether beef consumption declines, too, will depend on the cross-substitution possibilities in Portuguese consumer preferences. Insufficient evidence is available on this.

### Swine

Production, consumption, and imports of pork have significantly increased in Portugal in the last two decades. Like beef, pork prices are generally higher in Portugal than in the EC. With the higher feed costs upon entry, profit margins on swine production will also be squeezed unless

productivity increases, as from improved feed conversion and offtake rates. Maize is also likely to be replaced by barley, oats or sorghum in feed rations. The net effect of these adjustments cannot be predicted with the available information.

### Poultry

Poultrymeat production has been the fastest growing sector of Portugal's animal agriculture. Per capita consumption has grown rapidly and is now on a level comparable to that in the EC. More than 80 percent of production is in modern facilities using compound feeds. While production costs will rise, the efficiency of Portugal's production should make it competitive. The industry should be able to produce an exportable surplus to the rest of the EC if the demand is there.

Portugal is about self-sufficient in egg production, and its prices are below those in the EC. Entry in the EC might generate exports of eggs.

### Sheepmeat and Goatmeat

Portuguese consumers eat relatively little lamb and mutton. Production of sheepmeat and goatmeat have been increasing about in tandem with consumption. The EC is a net importer of these meats. With pasture development in the Alentejo, Portugal could become an exporter of these meats to the rest of the EC, as has Ireland since its entry. This will depend in part on how the CAP for sheepmeat evolves.

### Milk and Dairy Products

Per capita consumption of dairy products is low in Portugal despite the fact that the consumer price of milk is subsidized. As seen above, the producer price of milk in Portugal is less than it is in the E.C., but producers enjoy substantial subsidies to their compound feed use. Production

per cow is relatively low, and herds are extremely small. Portuguese dairy farmers enjoy a complex system of other subsidies. Nevertheless, production has not kept up with the growth in consumption, and imports have risen. Upon entry, Portuguese dairy production is likely to be squeezed unless substantial modernization and increased reliance on pasture for feed occurs. The rest of the EC, which has large dairy surpluses, will welcome a dairy product deficit member of the Community to absorb some of its exports which now have to be subsidized.

#### Net Effects

Portuguese agriculture will affect the rest of the enlarged EC relatively little, but the EC's CAP will have a profound effect on Portuguese farmers and consumers. Consumers will experience a significant reduction in real income from higher food prices on joining the EC. This will impact most the lowest income groups, who spend the largest fraction of their income on food. Grain producers will benefit significantly from the higher EC prices. The increase in revenue, however, will be quickly capitalized into the value of those farm assets in least elastic supply. Livestock producers who rely heavily on purchased mixed feeds will see their margins trimmed on both sides. Unless feeding of ruminants shifts to greater reliance on forage, these sectors are likely to decline, and capital losses will be realized by present producers as asset values have to be written down. Production of monogastrics, particularly swine, will need to become more efficient in the face of narrowing profit margins. To benefit from EC entry, the fruit, vegetable, and wine sectors will need to emphasize high quality or specialty products and develop the reputation as a dependable supplier.

As argued previously, the magnitude of the absolute price changes in Portugal will depend on the green rate negotiated. It should be very much

in Portugal's interest to negotiate a green rate fairly close to equilibrium, not highly overvalued. If not, Portugal could very easily experience a net balance of payments transfer to the EC Commission from its agricultural import levies.

### Structural Policy

Portugal's agriculture, particularly in the North, is among the least developed in Europe. In its entry negotiations Portugal needs to negotiate a structural assistance package to help develop its agriculture and make it more competitive. This may also be the only means by which Portugal's agriculture will be a net beneficiary of EC accession.

While this review of policy has focused more on price policy, several areas in which attention appears needed are briefly listed for completeness, but with little development:

- (a) Investment in rural education to increase the productivity of labor in agriculture and to facilitate outmigration of labor from agriculture.
- (b) Investment in rural roads, communications, and marketing infrastructure, particularly in the North.
- (c) Stabilize land ownership rights and legitimize titles in the land reform areas of the South.
- (d) Facilitate combining of fragmented small parcels of land in the North into economic size holdings.
- (e) Expand the nonfarm employment opportunities in rural areas where holdings are small and little opportunity for increasing their size exists.
- (f) Increase investment in agricultural research to generate cost-reducing technologies adapted to Portuguese conditions.
- (g) Improve the quality of agricultural extension activity, particularly in terms of practical experience of extensionists to increase their credibility to farmers. (Extension workers also need to take

information out to farmers, not wait for farmers to come to them.)

- (h) Reform the agricultural credit system, which appears not to be working. (Restoration of confidence of investors will be necessary before much investment resumes.)

#### Suggestions for Further Research

After completing his review of the available analyses of the likely effects of EC accession on Portuguese agriculture, this consultant concluded that there are five important areas in which the available studies fall short. These are discussed in turn.

- (1) There is very little analysis of the regional implications. In each region of Portugal we expect there will be some positive and some negative effects of EC accession. It is important to identify these and design policies to facilitate the needed adjustment. Yet Portuguese agriculture is so different in the respective regions that it would be meaningless to design structural adjustment policies on the basis of national aggregate analyses. As point of departure, calculations of the effect of adopting the CAP on value-added in the respective commodities using regional technical coefficients would be suggestive of the direction of resource shifts. In-depth case studies are likely to be needed in selected subregions given the heterogeneity of agriculture.
- (2) Most existing studies are very partial and ignore commodity substitution effects in both supply and demand. They also ignore the factor markets of the studies reviewed. Only the studies of Brito Soares and Smith include any substitution effects, and in these, they are somewhat limited. Given the very large changes in relative prices that can be expected from EC accession, the substitution and real income effects will likely swamp the own price effects. There appears to exist very

little empirical evidence on the magnitudes of these, particularly at the regional levels. Econometric estimates of complete demand systems are needed. Since a complete supply system probably cannot be estimated due to the recent structural change, regional sector models are needed.

A reasonable place to begin this effort would be construction of some representative farm models. A not inconsequential gap in our knowledge is in the supply response behavior of the collective and cooperative farms. Some good micro analysis of what EC accession means at the individual farm level could be extremely useful and could provide the basis for extension activity and publications.

- (3) While there has been a great deal of commodity analysis, little analysis of the agronometary issues was found. In particular, the level at which the green escudo should be pegged will be one of the most critical issues negotiated concerning accession. Yet one finds very little recognition of this fact. "Common pricing" in EC agriculture is a myth, and Portugal needs to have its homework done on what green rate for the escudo would be most beneficial in attaining national objectives.
- (4) Almost all the analyses focus on only the short- to medium-run effects of EC accession. In the long run one expects that EC accession will accelerate the rate of economic growth in Portugal. Initially Portugal's relatively low wage rates should attract foreign investment (assuming investor confidence is restored). This will increase the capital:labor ratio, and in turn average labor productivity. Over time, urban wages and per capita incomes will rise. Eventually this will pull more labor out of agriculture, bidding up rural wages as well. This is a normal part of the structural transformation which accompanies economic development. Nevertheless, most EC accession

studies have used naive trend extrapolation of income growth to project domestic demand. They have ignored the effect of the rising wage rate on the product mix as well as on the choice of technology itself. Those production processes in which factor proportions are most rigidly fixed (olives? dairy?) will become relatively higher cost and therefore less competitive. In the long run these effects may well be more important than the price effects. To gain insights on these effects, evaluation of the factor substitution possibilities in the available technologies is needed.

- (5) Closely related to this, one finds little research in Portugal on agricultural development per se, in particular on the sources of growth in agricultural output. EC assistance will be available for structural adjustment. Yet one finds little in the way of studies to help identify those social investments which would have the greatest social payoff in the form of more rapid agricultural development. Is it in infrastructure? in rural education? in consolidating holdings? in agricultural research? or what? The answer will likely vary by region. The time is very late for carrying out such analysis.

OBSERVATIONS ON THE ACADEMIC DEPARTMENTS VISITED

During my consultancy in Portugal I spent approximately three weeks in the Departments of Economics and Management at the University of Evora, three days at the Instituto Universitario de Beira Alta (IUBA) in Covilhã, and one week in the Department of Economics and Sociology at the Instituto Universitario de Tras-Os-Montes e Alto Douro (IUTAD) in Vila Real. These three institutions and their interest and capacity for carrying out research on EC accession vary significantly. Brief comments germane to this question and to the secondary objective of my consultancy of advising staff members on course content, research, and professional growth in general, are made in this section.

University of Evora

It is important to recognize at the outset that Evora's Departments of Economics and Management are general, not agricultural, economics and management departments. Their heads both have their doctorates in agricultural economics, and each has one engenheiro agronomo on its staff. All other staff members' training is in general economics or management, and they have no specific interest in agriculture. They aspire to compete with the established universities of Lisbon, Coimbra or Porto in turning out general economists or business managers. The economics curriculum is basically the same as in the mainline universities. On paper it looks very good, even perhaps too ambitious, given the virtual absence of electives in the five-year program. The curriculum includes one course in agricultural economics for general economists. Agricultural majors do not take this, but they do take introductory micro- and macro-economic principles and some management.

One problem of the Departments is the low level of training of the staff, many of whom are young and still relatively inexperienced. In most cases staff members have only undergraduate degrees themselves and have not taken higher level courses than those they are teaching. Some were trained in the mid-1970's when university education was virtually paralyzed in Portugal. I found the staff to be highly motivated and hard working. Many recognize that there are deficiencies in their training. Moreover, they are also concerned about the tenure of their employment in light of the rule that they must hold a doctorate by the end of eight years of employment at the University.

Some staff expressed interest in doing research, but few are doing much. Many have little time since they are still working up class materials for courses they are teaching for the first time. Library resources in Evora to support agricultural economics research are virtually nonexistent. For example, the library contains no international journals. In Evora, only a 16K microcomputer is available for data analysis. One must go to Lisbon for access to library resources and a larger computer.

There is virtually no extension emphasis now, nor does one seem to be in the plans. Some interest was expressed in applied research which might result in extension-type circulars or seminars on campus.

The Departments enjoy excellent leadership under Professor Antonio Pinheiro-- 1 of Portugal's 3 U.S.-trained Ph.D.'s in agricultural economics. (Professor Luis Portugal, the Head of the Management Department and who has a Ph.D. from Reading, is on leave at O.E.C.D. in Paris, so Pinheiro is acting head of that Department.) If the Departments are to build up programs which can compete with the old mainline universities of Portugal, substantial resources for staff upgrading through graduate training will be required.

During my first week in Evora I was afforded a considerable amount of time to read and assimilate the previous analyses and reports on Portugal's accession to the EC which I had collected in Lisbon. This unanticipated luxury was at least partially due to a lack of communication to the staff members of my availability for consultation on more than just EC accession research. In addition, my not being officed with or near the Departments concerned increased the distance. Nevertheless, by the last week in Evora, I had a substantial amount of interaction with the staff members.

Throughout my visit to Evora my main counterpart concerning research on EC accession, beyond Antonio Pinheiro, was Antonio Covas. Covas is a very well informed young man on EC issues from whom I learned a great deal. He has considerable general institutional and legal knowledge of the E.C. I went to Evora expecting that he would be the staff member from there to come to Purdue for short-term training with me in the fall of 1981. However, it became apparent in our conversations that he had his heart set on going to the Free University of Brussels for a graduate degree and was not interested in coming to the U.S. for short-term training. So, only in the last days of my stay in Evora did I line up Leonor Carvalho to come instead. While she had no experience in working on EC questions, her stronger economic analytical and quantitative skills make her a better choice as a research collaborator.

Another useful contact was with Dr. Lopes Figueireiro of the Regional Planning Office in Evora, who came to meet with me and several staff members to discuss possible research on the effects of EC accession on that region. He appeared genuinely interested in eliciting collaboration with the University on this subject.

Covilhã

My visit to the IUBA in Covilha lasted only 2½ working days, so my involvement there beyond giving a seminar was limited. I did have very good discussions with the Reitor, Professor Passos Morgado, and several of the staff members.

The IUBA has two areas of study, textiles engineering and management. The textiles engineering program is unique in Portugal and appears to have its niche well established. However, I would expect that the management program will have difficulties competing with the recent proliferation of management programs around the country, particularly those receiving foreign assistance, e.g., the New University of Lisbon's Wharton School link through a USAID grant.

While the IUBA has no explicitly agricultural programs of study, I found considerable interest in research on international trade in textiles and agricultural products of the region, especially in the context of EC entry. The regional development implications of EC accession were high on people's consciousness in Covilhã, including what adjustments these two industries would have to make to compete in the E.C.

Vila Real

If I sensed that more time than necessary had been allocated to my stay in Evora to achieve the objectives there, too little was allocated to my visit to the Department of Economics and Sociology of the IUTAD in Vila Real. I was literally run ragged in the five working days there, whose activities included: visits to agricultural processing firms in two different parts of the region, individual consultation with every staff member in the Department, and presentation of a two-day symposium on EC accession for

70 participants from the university, producer groups, the regional planning agency, and the Ministry of Agriculture. After being received with some indifference in Evora, this final week spent in Vila Real was exhilarating.

I found the IUTAD staff to be enthusiastically committed to the land grant philosophy of interlinked teaching, research and extension activities. While officially a general economics and sociology department, there is a strong commitment to contribute to solution of agricultural problems of the region through training students from the region, doing applied research on regional problems, and extending the results to the broader public. There is activity going on on all three fronts. As in Evora, Vila Real's staff has the same type of needs for graduate training.

On E.C. accession issues, the principal person in Vila Real is Colaço de Rosario, a veterinarian by training, working in the area of cooperatives. He is well informed on EC matters and has good ties with producer groups.

Rather than research issues, my focus in Vila Real was to help in the extension area by putting on the EC accession symposium. In a sense, this was a demonstration of an extension technique for the staff members, as I'm sure they could have done the same thing probably better, but lacked the experience and/or self-confidence to try it. Prior to the symposium they had assembled an impressive library of EC accession literature (really the best collection in one place that I saw while in Portugal). They are well-equipped for extension activities or applied research on agricultural aspects of E.C. accession.

FUTURE PLANS

At the end of my consultancy in Evora, arrangements were completed for Leonor Carvalho to come to Purdue for the fall 1981 semester to work with me on designing a study of the implications of EC accession for Alentejo agriculture. It is hoped that this work might have the double benefit to her of evolving into her doctoral thesis.

In terms of my own research on Portuguese policy, a manuscript is in progress with Garry Smith comparing the predicted effects of accession using effective protection analysis versus a sector simulation model. We had planned to bid on the PROCALFER agricultural policy subproject which would have been highly complementary to these activities. However, OICD's decision to go sole source without ever advertising for proposals ruled that out. The consultant still has considerable interest in working on Portuguese policy, but with University resource constraints being what they are, a shift to other countries for which research resources are available was dictated.

Vila Real expressed interest in my return in 1982, and Evora has a repeat visit on its longer term work plan. For blocks of time of one month or more, it is necessary to get the dates scheduled reasonably firmly at least six months in advance, as my calendar tends to start filling up at least that far in the future.