INTERNATIONAL ASPECTS OF THE EC'S AGRICULTURAL POLICIES
Relations with the Gulf states

Juni 1990

Agricultural Economics Research Institute LEI
ABSTRACT

INTERNATIONAL ASPECTS OF THE EC'S AGRICULTURAL POLICIES; RELATIONS WITH THE GULF STATES
Silvis, H.J., H. Al Habaal en E.E.J.M. van Liempd
The Hague, Agricultural Economics Research Institute LEI, 1990
Onderzoekverslag 68
ISBN 90-5242-076-9
62 p., tab., fig.

Report on part of a research into third country effects of the EC's agricultural policies, based on a study of literature and a visit to Saudi Arabia and Kuwait in the summer of 1989. It starts with a general assessment of natural and economic conditions in the Gulf and gives an appraisal of the agricultural developments in the Gulf states. Attention is paid to the Gulf Cooperation Council (GCC) and to the cooperation agreement between GCC and EC, which was signed in 1988. Next, the trade relation is analysed, both in qualitative and in quantitative terms. Whereas the GCC is the main supplier of energy to the EC, the latter is the most important supplier of agricultural products to the GCC. Notwithstanding their agricultural achievements, the Gulf states will remain a challenging export market for European agriculture. For many years they have benefitted from the EC's agricultural policies, and of the related competition on world food markets between the EC and the US. It is guessed that in case of a EC/US compromise in the Uruguay Round, the Gulf states are going to have to pay more for their agricultural imports.

Agriculture/Agricultural policies/Trade/Gulf states/EC

CIP-GEHEVEN KONINKLIJKE BIBLIOTHEEK, DEN HAAG

Silvis, H.J.

ISBN 90-5242-076-9
SISO 630.5 UDC 338.43:339.92(4-627EG:53) NUGI 835
Trefw.: landbouwbeleid ; Europese Gemeenschappen.

The contents of this report may be quoted or reproduced without further permission. Due acknowledgement is requested.
## Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOREWORD</td>
<td>5</td>
</tr>
<tr>
<td>SUMMARY</td>
<td>7</td>
</tr>
<tr>
<td><strong>1. INTRODUCTION</strong></td>
<td></td>
</tr>
<tr>
<td>1.1 Why study the Gulf states</td>
<td>11</td>
</tr>
<tr>
<td>1.2 Research questions</td>
<td>12</td>
</tr>
<tr>
<td>1.3 Approach and sources</td>
<td>12</td>
</tr>
<tr>
<td>1.4 Structure of the report</td>
<td>13</td>
</tr>
<tr>
<td><strong>2. GEOGRAPHY AND CLIMATE OF THE GULF STATES</strong></td>
<td></td>
</tr>
<tr>
<td>2.1 Geography</td>
<td>14</td>
</tr>
<tr>
<td>2.2 Climate</td>
<td>16</td>
</tr>
<tr>
<td><strong>3. ECONOMIC STRUCTURE AND DEVELOPMENT OF THE GULF STATES</strong></td>
<td></td>
</tr>
<tr>
<td>3.1 General</td>
<td>18</td>
</tr>
<tr>
<td>3.2 Saudi Arabia</td>
<td>19</td>
</tr>
<tr>
<td>3.3 Kuwait</td>
<td>21</td>
</tr>
<tr>
<td>3.4 United Arab Emirates (UAE)</td>
<td>22</td>
</tr>
<tr>
<td>3.5 Oman</td>
<td>23</td>
</tr>
<tr>
<td>3.6 Qatar</td>
<td>23</td>
</tr>
<tr>
<td>3.7 Bahrain</td>
<td>23</td>
</tr>
<tr>
<td><strong>4. AGRICULTURAL GROWTH IN THE GULF STATES</strong></td>
<td></td>
</tr>
<tr>
<td>4.1 General</td>
<td>25</td>
</tr>
<tr>
<td>4.2 Saudi Arabia</td>
<td>25</td>
</tr>
<tr>
<td>4.2.1 Introduction</td>
<td>25</td>
</tr>
<tr>
<td>4.2.2 Policies</td>
<td>26</td>
</tr>
<tr>
<td>4.2.3 Production</td>
<td>28</td>
</tr>
<tr>
<td>4.2.4 Perspectives</td>
<td>30</td>
</tr>
<tr>
<td>4.3 Kuwait</td>
<td>30</td>
</tr>
<tr>
<td>4.3.1 Introduction</td>
<td>30</td>
</tr>
<tr>
<td>4.3.2 Policies</td>
<td>30</td>
</tr>
<tr>
<td>4.3.3 Production</td>
<td>31</td>
</tr>
<tr>
<td>4.3.4 Perspectives</td>
<td>32</td>
</tr>
<tr>
<td>4.4 United Arab Emirates (UAE)</td>
<td>32</td>
</tr>
<tr>
<td>4.4.1 Introduction</td>
<td>32</td>
</tr>
<tr>
<td>4.4.2 Policies</td>
<td>33</td>
</tr>
<tr>
<td>4.4.3 Production</td>
<td>34</td>
</tr>
<tr>
<td>4.4.4 Perspectives</td>
<td>35</td>
</tr>
<tr>
<td>4.5 Oman</td>
<td>35</td>
</tr>
<tr>
<td>4.5.1 Introduction</td>
<td>35</td>
</tr>
<tr>
<td>4.5.2 Policies</td>
<td>36</td>
</tr>
<tr>
<td>4.5.3 Production</td>
<td>37</td>
</tr>
<tr>
<td>4.5.4 Perspectives</td>
<td>37</td>
</tr>
<tr>
<td>4.6 Qatar</td>
<td>37</td>
</tr>
</tbody>
</table>
CONTENTS (continue)

4.6.1 Introduction 37
4.6.2 Policies 38
4.6.3 Production 38
4.6.4 Perspectives 39

4.7 Bahrain
4.7.1 Introduction 39
4.7.2 Policies 40
4.7.3 Production 40
4.7.4 Perspectives 41

5. THE GULF COOPERATION COUNCIL AND THE EUROPEAN COMMUNITY 42
5.1 The Gulf Cooperation Council (GCC) 42
5.1.1 Introduction 42
5.1.2 The Unified Economic Agreement 42
5.1.3 The GCC organization 43
5.1.4 Achievements 44

5.2 The GCC and the EC
5.2.1 The EC/GCC Cooperation Agreement 45
5.2.2 Petrochemicals 46
5.2.3 Agriculture 46

6. AGRICULTURAL TRADE RELATIONS BETWEEN THE EC AND THE GCC 48
6.1 General 48
6.1.1 Qualitative aspects 48
6.1.2 Quantitative aspects 49

6.2 Agricultural trade
6.2.1 Balance 49
6.2.2 EC imports from GCC 50
6.2.3 EC exports to GCC 51

6.3 Effects of the Common Agricultural Policy 54

7. OUTLOOK 56

REFERENCES 58
Foreword

This report results from a research project, initiated by the Agricultural Economics Research Institute LEI, into the third country effects of the EC's agricultural policies.

In an enthusiastic way the research was undertaken by Haisam Al Habaal and Jeroen van Liempd, both studying at Wageningen Agricultural University, as part of their thesis on agricultural economics and policy. They gathered and summarized available literature and creatively as well as persistently arranged a ten day trip to Saudi Arabia and Kuwait. This trip became a success through the generous support from the Netherlands Embassies. Financial support for the trip was obtained from Wageningen University, LEI and Rabobank Nederland.

The research was supervised by Huib Silvis, staff member of the Department of Agricultural Economics and Policy of Wageningen Agricultural University, who also took care of the final editing of the report. At the LEI assistance was given by Jaap Post and Siemen van Berkum.

Department of Agricultural Economics and Policy, Wageningen Agricultural University

Agricultural Economics Research Institute LEI

Wageningen/Den Haag, 1990

J. de Hoogh

J. de Veer
Summary

Background

During the last twenty years the Gulf states have played a role of increasing importance on the world market as buyers of agricultural products. This role was induced by the rapid oil-based developments of their economies in terms of purchasing power and population, which in the seventies and early eighties led to a great increase in consumption. Domestic production of agricultural products could not meet the demand. In 1987 the Gulf states took a share of 6 percent of the EC's agricultural exports. In order to reduce their high dependency on agricultural imports they have made great efforts to develop and expand their agricultural sectors by means of investments, subsidies, loans and other incentives.

The development of the agricultural sectors in the Gulf countries is conditioned by a range of geographical, agronomical, socio-economic and political factors. Information about these factors provides a necessary background against which the agricultural trade relationship between EC and GCC can be assessed. Research on these questions was started with an extensive literature study. Through a visit to Saudi Arabia and Kuwait more accurate and reliable information was obtained on the agricultural developments in the Gulf and actual viewpoints from the people involved were learned.

Natural conditions

The Gulf states, which at present have a total population of about 15 million people, all neighbouring the Arabian Gulf. Apart from Bahrein, which is an island, the Gulf states lie on the Arabian Peninsula. The warm and dry climate of the Arabian Peninsula is unsuitable for agriculture. The temperature reaches 50°C in summer, while in winter strong nightfrosts are possible, especially in the central plateau. Besides that, the interior of the peninsula has a low air humidity while the air humidity in the coastal zones is very high; especially during the summer. On the central plateau and the lower coastal areas the average precipitation is less than 100 mm per annum. In the south western highlands of Saudi Arabia and the Dhofar mountains in south Oman the annual precipitation range from 100 mm to 500 mm. Most of the precipitation comes in heavy, short showers. Kuwait, eastern Saudi Arabia and the United Arab Emirates regularly suffer from the "shamal", which is a strong north western wind loaded with dust and sand that clouds the sky and penetrates into everything.
General economic conditions

The discovery of oil in the region, in the early thirties, has fundamentally changed the economic character of the Gulf. The traditional trade, nomadic husbandry, fishing and pearling, which were the main sources of subsistence, lost much of their significance in the last decades.

Now, the exploitation of oil is the basic pillar of the economy. In Saudi Arabia, which owns a quarter of the world's discovered oil reserves, public revenue is dependent on the export of crude oil and refined oil products for 70%. The oil boom in the early and midseventies increased oil income for Saudi Arabia from less than 3 billion US dollar in 1972 to more than 100 billion in 1980. Other Gulf states increased their oil income at a comparable rate. However, since 1982 oil revenues started to decline, primarily due to a price drop of over 50%. By decreasing the production, the Gulf states have tried to diminish the over-supply of oil. But the fall of the dollar rate reduced the income of the Gulf countries even more. Total GCC oil income in 1989 had fallen to almost a third of Saudi Arabian income in 1981.

Agricultural growth

In terms of agricultural production, the achievements in the Gulf states are amazing. For many products the self-sufficiency rates went up from virtually zero to a significant percentage within a decade's time. In most of the Gulf states the poultry meat and egg production meets 40 to 50% of the domestic demand. Vegetable production is restricted to a certain period of the year, but during the growing season surpluses often occur for different sorts of vegetables. The most surprising result however is the wheat production of Saudi Arabia. In 1975 it only amounted to 125,000 tonnes, but this had gone up to 2,8 mln tonnes in 1988. As far as animal production is concerned, the GCC countries are almost totally dependent on feed imports as climatic control systems, necessary to make production feasible under arid conditions, force up the costs of production. For dairy production some Gulf states can meet 30% of the local demand.

When studying the success of the agricultural production, some serious problems come to light as well. Major problems are the poor soil quality and the limited water resources. In order to enable crop production the soil has to be washed out with huge quantities of water to decrease the salinity. Agriculture therefore is a very costly activity and the limited water resources are used rather inefficiently.

Another point is that the agricultural sector is built up mainly with foreign labour. Most of the producers and land owners in the region do not consider themselves as farmers and, general-
ly, they are not directly involved with the production process. Therefore, those production units frequently lack experienced manpower after the departure of the skilled foreign workers.

To a large extent agricultural production in the Gulf states is enabled by governmental financial support. Input and output for farmers subsidies, soft bank loans and investment subsidies are made available for farmers. Recently diminished public revenues, due to the fall of the oil exports and prices, have placed the governmental stimulation programmes in the Gulf countries under considerable pressure. For the time being, the financial support for agricultural production is continued whilst the rationalizing of the economy is shifted toward other sectors. Governments now follow a more restricted policy with respect to agriculture.

**The Gulf Cooperation Council (GCC)**

By signing the Unified Economic Agreement in November 1981, the Gulf states formed the Gulf Cooperation Council (GCC). The main goals of this formation are to achieve closer relations and stronger links. According to the Unified Economic Agreement, it aims to develop, enhance and extend the economic ties between the member states and looks forward to coordinate and standardize the economic, financial and monetary policies as well as the legislations in the major production sectors.

The agreement consists of seven chapters which deal with trade exchange, movement of capital and individuals, coordination of development, technical cooperation, transport and communications, and financial and monetary cooperation.

The GCC has achieved a collective approach in political, trade and defence field, which proved strong enough to surmount several internal tensions and to create a politically stable region even during the Gulf war period.

However the GCC doesn't seem to have made much progress in cooperation with respect to agriculture. Still lacking is a joint subsidy legislation in the agricultural sectors of the member states, which means that unrestricted trade might cause unfair competition. This issue seems to be one of the sensitive subjects within the GCC.

**Relations between GCC and EC**

In June 1988 a tentative cooperation agreement between the EC and the GCC was signed. This multilateral economic agreement provides a rough framework concerning industry, agriculture, fisheries, trade, energy, science, technology, environment, education and investments. It is mainly composed of objectives and goals, whereas the means by which these should be achieved must be further outlined. Sensitive aspects have been postponed to a further agreement.
Agricultural trade

The agricultural trade between the GCC and the EC is of a rather unilateral nature: the EC is the exporting and the GCC the importing unit. The GCC member states have a simple and clear import tariff system. Agricultural commodities used to enter the GCC with imposed duties between 0 and 7%. However, customs duties on agricultural imports have gone up for many products recently, whilst for some other products even a 25% custom duty will have large volume effects on the agricultural trade.

Over the last years total agricultural exports of both the EC and the US to the GCC have been fairly constant, while total agricultural imports by the GCC countries have declined as a result of their increasing production. Consequently, the EC and the US increasingly dominate agricultural exports to the Gulf states. Together they cover about 40-50% of the total agricultural imports by the Gulf countries. With regard to dairy products and grain they took account of 60-70% of the GCC imports in 1986 and 1987. No significant changes occured in the distribution of the imports from the EC and the US, although the US took over the lead in the large barley market. In general, the agricultural export value of the EC has been 2 - 2.5 times the export value of the US. For the GCC agricultural imports are dominated by Saudi Arabia, accounting for some 70% of the trade with the EC and the US.

Recently, the EC's agricultural exports to the Gulf states have come under pressure. Several factors are involved: the reform of the CAP, the falling dollar rate, higher customs duties on agricultural products, and the success of the Gulf states agricultural development.

Outlook

The Gulf countries are among the food importing countries that have for many years benefitted greatly from the surplus disposal programs of the EC, and of the related competition on world food markets between the EC and the US. As the negotiations on world agricultural trade in the Uruguay Round of the GATT have now entered its fourth and final year, it is a reasonable guess that in case of a EC/US compromise, the Gulf states are going to pay more for their agricultural imports.
1. Introduction

1.1 Why study the Gulf states

Saudi Arabia, Kuwait, the United Arab Emirates, Oman, Qatar and Bahrein, which form the Gulf states, maintain important trade relations with the European Community. For example, they are the biggest suppliers of energy imported by the EC, whereas the EC is the largest supplier of agricultural products and equipments to the Gulf countries.

However, it is not obvious why these countries should be included in a study concerning the international aspects of EC's common agricultural policy (CAP). Unlike most of the developing countries, the Gulf states are rich and powerful and therefore perfectly able to defend and pursue their own interests. Furthermore, the Gulf states have never filed complaints against the CAP and neither do they beat the drum in the Uruguay Round of the GATT with respect to agricultural trade liberalization. So why take a further look at these countries if there seem to be no serious problems or special aspects in the agricultural trade relationship?

A first reason for studying the Gulf states is provided by the signing in 1988 of a tentative cooperation agreement between the EC and the Gulf Cooperation Council (GCC), the organization which was established by the Gulf states in 1981. The agreement aims to promote joint ventures and technology transfer and should also clear the way towards substantive talks on the petrochemicals trade.

Another reason is that in the last twenty years they have played a role of increasing importance on the world market as buyers of agricultural products. This role was induced by the fast, oil-based developments of their economies in terms of purchasing power and population, which in the seventies and early eighties led to a much faster increase of consumption than domestic production of agricultural products. In 1987 they took a share of 6 percent of EC's agricultural exports.

Last but not least, taking a closer look at the Gulf states is worthwhile because, in order to reverse the above-mentioned trend, they have been making big efforts to develop and expand their agricultural sectors by means of investments, subsidies, loans and other incentives. The future of EC's agricultural trade with the Gulf states will partly depend on the success of these developmental agricultural policies.
1.2 Research questions

The central research questions of the LEI-project 'International aspects of EC's common agricultural policy', of which this study forms a part, are how and to what extent the CAP influences the agricultural sectors in non-member states. In general the focus is on agricultural markets, prices, and trade policies in third countries. However, as far as the Gulf states are concerned such an approach would be too narrow. Firstly, they have no systematic market and price policies and there are only few regulations concerning the agricultural trade. Secondly and more importantly is that their agricultural policies are of a developmental nature. Therefore, to get a good idea of the relevant relations, it is necessary to study the development of the agricultural sectors in the Gulf countries. Thereby the relevant geographical, agronomical and socio-economic factors are to be taken into consideration. The collected information on these factors and on the agricultural sector developments provides the necessary background against which the agricultural trade relationship can be treated and the effects of the CAP can be discussed.

1.3 Approach and sources

Taking into account the breadth and sensitivity of the studied subjects on the one hand and the big number of countries involved in this study on the other hand, it is virtually impossible to make a complete study on these affairs within the short period within which the research had to be conducted. For this reason it was tried to concentrate on the general aspects which apply to the whole area. Nevertheless, the situations and developments in the different Gulf states have also been investigated separately.

The research was started with a literature study in which available publications from the EC in Brussels, magazines and papers from Dutch ministeries and authorities and other scientific periodicals were involved. An overview of this material is given in the bibliography at the end of this report.

In order to obtain the most accurate and reliable information concerning the agricultural developments in the Gulf and to learn the points of view from the people involved, a visit was paid to two countries in the region; Saudi Arabia and Kuwait. This visit, which lasted ten days, took place in the summer of 1989. Valuable information was collected both at the Dutch embassies (from mr. Brouwer and mr. Hilgeman) and during several meetings with Arabian officials and businessmen. The knowledge and experience of these people have been of great importance and contributed noticeably to the contents of this report.
The visit explains that in this report more attention is paid to Saudi Arabia and Kuwait than to the other countries. It would have been better for the study, of course, if all Gulf states had been visited. Unfortunately, the short time and finances did not make this possible.

Studying the agricultural developments in the Gulf states has proven to be not an easy task. There was little known about them. In contrast to OECD countries such as the United States and Japan, no detailed agricultural policy reports on these countries are available. Moreover, many statistical data on the sector are either not collected or not published. And when figures are available, great inconsistency in information can sometimes be encountered: publications and statistics concerning both the trade as well the local production in the Gulf contradict frequently. There is also lacking in many significant and recent information with respect to import duties, local consumption and internal trade within the Gulf states. These problems must be considered as severe constraints for this research.

1.4 Structure of the report

In the next chapter an outline is given of the geographical and climatical background of the area. Chapter 3 provides information on the economic structure and development of the Gulf states, while chapter 4 focusses on the agricultural policies and developments. Chapter 5 describes the Gulf Cooperation Council (GCC) and its relation with the EC. Then in chapter 6 an analysis is given of the agricultural trade between the EC and the GCC. Chapter 7 concludes this report with the main conclusions and an outlook.
2. Geography and climate of the Gulf states

2.1 Geography

The Gulf states, which at present have a total population of about 15 million people, all border on the Arabian Gulf. Apart from Bahrein, which is an island, the Gulf states lie on the Arabian Peninsula.

The west side of the Arabian Peninsula is dominated by mountains resulting in a narrow coast plain, the Tihama. East of the highlands lies the central plateau which is bordered by the Nafud desert in the north, the Dahna desert in the east and Rub Al Khali desert, which is a huge sand desert, in the south.

The east side of the Arabian Peninsula mainly consists of a sandy plain that borders to the Arabian Gulf. Kuwait, eastern Saudi Arabia and the northern part of the United Arabic Emirates are located in this area. The area is composed of sand dunes and salt plains (sabkha's) which gradually decline towards the Arabian Gulf. In some places near the coast 'oasis' can be found. These do not depend upon rainfall but upon the ground water. This water has been transported from the mountains in the west via conveying layers to the dipping east coast. In various locations the water is welling to the surface naturally.

The coastal zone of the western and southern Arabian Gulf is very flat. It consists of sand banks, shoals, coral reefs and little islands. In the far east and south east of the peninsula (eastern United Arab Emirates and Oman) a different landscape occurs. In the east of the United Arabic Emirates and the east of Oman the Hajar mountains are situated from the Hormuz street to the Arabian Sea. The highest tops reach altitudes over 3000 metres. On the west of the northern Hajar mountains there is a broad plain called the Dhahirah, on the eastern side there is a small plain bording to the Gulf of Oman that is called the Batinah. In the Hajar mountains wadi's can be found as well which carry off the water towards the Gulf of Oman and the Arabian Gulf. The plains on the west and east side of the Hajar mountains consist of erosion material.

South of the Hajar mountains lie 700 km of desert, an extension of the Saudi Arabian Rub Al Khali. The desert consists of sand dunes and salt plains. In the far south of Oman the Dhofar mountains are situated with a small coastal plain bording to the Arabian Sea (Bowen-Jones & Dutton 1983).
Figure 1.1 The Arabian Peninsula
2.2 Climate

The climate of the Arabian Peninsula can generally be described as warm and dry. There are great differences in temperatures and precipitation though. Near the Red Sea coast in the west of Saudi Arabia the average temperature throughout the year increases from 24 °C in the north up to 30 °C in the south. This means winter temperatures from 10 °C to 25 °C and summer temperatures from 35 °C to 50 °C. In the mountains winter temperatures are lower, nightfrost is possible, and the summer heat is tempered.

In the interior part of the peninsula, differences between summer and winter are bigger. During summer maximum day temperatures are 45 °C to 50 °C while in winter strong nightfrosts are possible (-7 °C). Near the Arabian Gulf coast temperatures are similar to the Red Sea coast.

The Hajar mountains in the United Arabic Emirates and Oman have bigger differences between summer, winter, day and night temperatures. In summer the maximum temperature is around 45 °C and in winter minima sometimes fall to 0 °C. In the south of Oman, near Salalah, winters are mild to warm and the summer heat is tempered due to the monsoon which just reaches this area and causes fog and drizzle.

In the interior of the peninsula the air humidity is low. This makes the summer heat reasonably bearable. The coastal zone, however, has a high air humidity. This is especially the case during the summer months. In the United Arabic Emirates the average air humidity may reach 97%! It is the combination of high temperatures and an almost saturated air which makes the coastal climate very unpleasant.

The precipitation on the Arabian Peninsula is to a large extent determined by the relief and the monsoon. On the central plateau and the lower coastal area the average precipitation is between 0 mm and 100 mm per annum. In the south western highlands of Saudi Arabia and the Dhofar mountains in south Oman the annual precipitation ranges from 100 mm to 500 mm. This is a result of the monsoon effect that is caused by the movement of the inter tropical convergence zone to the north in the summer months. Low pressure above the south western part of the peninsula then attracts sea winds. Where the humid sea winds meet the mountains the air has to rise and cools down which causes showers.

In the Hajar mountains it is also rising air that cools down and causes precipitation. This area is not influenced by the monsoon winds but showers can develop when air streams from the mediterranean reach the area during the winter months.

Most of the precipitation comes in heavy, short showers. In the Dhofar mountains part of the rainfall comes in the form of fog and drizzle caused by the south western monsoon during the summer.
Kuwait, eastern Saudi Arabia and the United Arab Emirates do regularly suffer from the "shamal". This is a strong north western wind loaded with dust and sand that clouds the sky and penetrates into everything.

From the above it will be obvious that agricultural production in this region will meet many problems. The agricultural growth in the Arabian Peninsula should therefore always be considered within the limiting natural constraints (Bowen-Jones & Dutton 1983).
3. Economic structure and development of the Gulf states

3.1 General

The discovery of oil in the region, in the early thirties, has fundamentally changed the economical character of the Gulf countries. The traditional trade, nomadic husbandry, fishing and pearling which were the main sources of subsistence lost much of their significance in the last decades. Now, the exploitation of oil is the basic pillar of the economy.

Table 3.1 Oil revenues of Saudi Arabia, 1972-1986, billion US dollars

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2.7</td>
<td>4.3</td>
<td>22.6</td>
<td>22.6</td>
<td>30.8</td>
<td>32.2</td>
<td>32.2</td>
<td>57.5</td>
<td>102.2</td>
<td>113.3</td>
<td>76.0</td>
<td>46.0</td>
<td>43.7</td>
<td>28.0</td>
<td>20.0</td>
</tr>
</tbody>
</table>

Source: Coeck, 1989.

The oil boom in the early and mid seventies increased oil incomes for Saudi Arabia from less than 3 billion US dollars in 1972 to more than 100 billion in 1980 (table 3.1). Other Gulf states increased their oil incomes in a comparable rate (Coeck 1989). However, since 1982 oil revenues started to decline, primarily due to a price drop of over 50%. By decreasing the production the Gulf states have tried to diminish the oversupply of oil. But the fall of the dollar rate lowered the incomes of the

Table 3.2 GCC oil revenues in 1989 by country in billion US dollars

<table>
<thead>
<tr>
<th>Country</th>
<th>1989</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saudi Arabia</td>
<td>18.3</td>
</tr>
<tr>
<td>Kuwait</td>
<td>5.8</td>
</tr>
<tr>
<td>UAE</td>
<td>4.4</td>
</tr>
<tr>
<td>Oman</td>
<td>3.2</td>
</tr>
<tr>
<td>Qatar</td>
<td>2.0</td>
</tr>
<tr>
<td>Bahrain</td>
<td>0.6</td>
</tr>
<tr>
<td>GCC total</td>
<td>34.2</td>
</tr>
</tbody>
</table>

Source: The Middle East, 1989.
Gulf countries even more. Total oil revenues of the Gulf states had in 1989 fallen to almost a third of Saudi Arabian income in 1981 (table 3.2).

Table 3.3 The total GCC account balance in billion US dollars

<table>
<thead>
<tr>
<th></th>
<th>1985</th>
<th>1985</th>
<th>1987</th>
<th>1988*</th>
<th>1989*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Export</td>
<td>63.5</td>
<td>44.4</td>
<td>51.6</td>
<td>52.6</td>
<td>53.8</td>
</tr>
<tr>
<td>Import</td>
<td>-39.9</td>
<td>-34.8</td>
<td>-35.4</td>
<td>-39.9</td>
<td>-42.3</td>
</tr>
<tr>
<td>Trade balance</td>
<td>23.6</td>
<td>9.6</td>
<td>16.2</td>
<td>12.7</td>
<td>11.5</td>
</tr>
<tr>
<td>Service &amp; Transfers</td>
<td>-23.9</td>
<td>-15.8</td>
<td>-17.6</td>
<td>-16.5</td>
<td>-16.2</td>
</tr>
<tr>
<td>Current account</td>
<td>-0.2</td>
<td>-6.2</td>
<td>-1.4</td>
<td>-3.8</td>
<td>-4.7</td>
</tr>
<tr>
<td>Cumulative cur. acc.</td>
<td>303.9</td>
<td>297.7</td>
<td>296.2</td>
<td>292.4</td>
<td>287.8</td>
</tr>
</tbody>
</table>

Source: The Middle East, April 1989, page 5-7.

*) estimates.

As a result the Gulf states taken together now cope with a negative current account. Table 3.3 demonstrates the recent developments in export and import figures and different balances in the period 1985-1989.

3.2 Saudi Arabia

With an area of 2.3 million km² Saudi Arabia is by far the biggest Gulf country. It is a unified kingdom which has been established in 1932. At present Saudi Arabia has a population of 12 million people, compared to 2 million in the 1930s. Half of the population lives in cities with more than 100,000 inhabitants. Jeddah has a population of 1.5 million people, Riyadh of 1.3 million and Mecca of 550,000. Of the total population 4 million people are foreigners. Especially after the early 1970s, when the oil boom started, much labour was needed. As there was a men were attracted.

In order to coordinate the economic development, the Saudian government drew up a long term planning by means of "five year plans", starting with 1970-1975. In this first five year plan the infrastructural development was the main goal. As a result many infrastructural projects have been carried out. Also much attention was being paid to social development such as hospitals and education. In later five years plans more and more emphasis was placed upon diversification of the economy. In the fourth five year plan (1985-1990) the government called attention to the limited expenditure possibilities caused by to the diminished oil incomes. Table 3.4 demonstrates national budget figures of Saudi Arabia in the period 1980/81-1986/87.
Table 3.4 National budget figures of Saudi Arabia, 1980/81-1986/87, billion SR

<table>
<thead>
<tr>
<th>Year</th>
<th>Incomes</th>
<th>Expenditures</th>
<th>Balance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980/81</td>
<td>348.1</td>
<td>236.6</td>
<td>111.5</td>
</tr>
<tr>
<td>1981/82</td>
<td>368.0</td>
<td>284.6</td>
<td>83.4</td>
</tr>
<tr>
<td>1982/83</td>
<td>246.2</td>
<td>244.9</td>
<td>1.3</td>
</tr>
<tr>
<td>1983/84</td>
<td>206.4</td>
<td>230.2</td>
<td>-23.8</td>
</tr>
<tr>
<td>1984/85</td>
<td>171.5</td>
<td>216.4</td>
<td>-44.9</td>
</tr>
<tr>
<td>1985/86</td>
<td>131.5</td>
<td>181.5</td>
<td>-50.0</td>
</tr>
<tr>
<td>1986/87</td>
<td>117.3</td>
<td>170.0</td>
<td>-52.7</td>
</tr>
</tbody>
</table>

Source: Coeck, 1989.

The main objectives of the fourth 5 Year plan are (Brouwer, 1989):

- Further development of education facilities in order to better educate the Saudis and hence to replace more expatriates;
- Improvement of the health service;
- Secure water supply for the future;
- Diversification of the industry;
- Further development of agriculture;
- The government aims to shift national companies to the private sector. In the future they should function on a commercial basis;
- The stimulation of initiative in the private sector is also considered important.

In 1987 crude oil revenues accounted for 60% of GDP. The remaining 40% were distributed as follows: construction sector 12%, industry 9%, trade 8%, transport and communication 7%, and 4% for agriculture and fisheries. In the industry item, refineries are included. That shows that the Saudian economy is dependent on oil production for more than 60%.

Mining contributes a minor part to the economy. There are great mineral resources, most of these however are not (yet) exploited.

The non oil industry is heavily subsidized by means of non- or low interest loans, free energy, cheap water etc. For the establishment of new industries, there is a big problem of insufficient qualified personnel.

The construction industry has grown very quickly over the last decade as a result of infrastructural projects. Within two decades Saudi Arabia has constructed an impressive network of roads and airports, has established modern harbors and has built...
built up modern cities. The construction industry is for a major part dependent on the import of raw material. As most infrastructural projects are finished now the construction industry is expected to decline in the years to come.

The chemical industry and the agro-industrial sector are developing quite well. The light industry is in private hands while the heavy industry is state owned, but the government aims to privatize this sector. The agricultural sector contributes only little to the GDP but is considered important by the government.

It is understandable that the development of the non-oil sector is stimulated. Foreign investors and initiatives in the private sector are required to help diversify the Saudian economy. The local industry is encouraged to take over shares in SABIC (Saudi Basic Industries Corporation). Except from the upkeep of industrial installations, the steel industry and the transport sector, there is only little expansion in the private sector. The petrochemical industry shows the biggest growth but being so dependent on the government, this sector can not really be considered as a private sector.

3.3 Kuwait

Kuwait is a small country, situated at the northern western border of the Arabian Gulf. It covers an area of 18,000 km². To a large extent the oil incomes have been spent to social and infrastructural provisions. Education and health service have been brought to a high level. As a result of this the population has grown rapidly over the last decades. In 1946 Kuwait had 100,000 inhabitants; in 1976 this had already gone up to 1 million while at present (1989) the number of inhabitants is around 2 million. Immigrants form 60% of the Kuwait population at this moment. The population of Kuwait is mainly concentrated in the city of Kuwait.

Apart from crude oil exports, the production and refining of natural gas contribute a considerable part to GDP. Capital invested in other countries, namely western Europe and the United States of America, also generate high incomes. A major part of these revenues is reinvested whilst the remaining part is kept in the Reserve Fund for Future Generations and hence is not yet accessible for use.

In order to develop the economy, five year plans were introduced, to start with 1968. The general goal over the years was the diversification of the economy. Seemingly all conditions for a non oil industrial development were available; cheap energy supply, more than enough capital and a sufficient labour force. However, labour costs were fairly high, there were no other raw materials but oil and for natural gas there was not a big market. As a result of this the industrial development was mainly limited.
to oil and oil-related industry. By means of soft bank loans, provided by the Industrial Development Bank, and subsidies the authorities have stimulated the establishment of new industries. The government has also founded the Gulf Investment Corporation in 1982. The objective of this organization is to attract foreign investors and to stimulate people from within the G.C.C. countries to invest in the Gulf states. To this end the G.I.C. supports commercially viable projects and identifies potential investment opportunities within various sectors.

Some non-oil industries have expanded, especially in the construction sector. This was mainly due to the rapid development of the infrastructure over the last years. Now the infrastructure is reaching its completion, the construction industry is expected to decline. Also fertilizer-, salt- and chlorine industries have developed rather well. Further there is some food processing but on a very small scale.

Since the fall of the oil prices after 1982, the oil incomes have diminished heavily from $14,800 million in 1981 to $6,000 million in 1986. As the public revenues are highly dependent on the oil incomes the government is confronted with budgetary deficits since 1982. In these figures the incomes of foreign investments are not included as these are either reinvested or reserved in the Reserve Fund for Future Generations.

3.4 United Arab Emirates (UAE)

The United Arab Emirates, which lie in the eastern side of the Arabian Peninsula between Qatar and Oman, is a federation of seven small states. It was formed in 1971 between Abu Dhabi as biggest, Dubi, Sharjah, Umm al Quaiwain, Ras al Khaimah, Ajman and Fujairah. As in the other Gulf countries, the total population of the Emirates increased very rapidly in the last few decades from 180,000 in 1968 to 656,000 in 1975 and to 1.6 million in 1986. The two cities Abu Dhabi and Dubi are responsible for the main part of the current population which is expatriated for more than 70 per cent (Hilgeman 1988).

Within the federation, the seven leaders of the different Emirates form the highest authority in which the rulers of Abu Dhabi and Dubi have a veto right. In addition, the federal government is responsible for the policies in foreign affairs, finance and defence fields, while the several Emirates are allowed to draw their own policies concerning the interior matters.

The ratio of oil export/total export equalled 88 per cent in 1986. In this year, the government depended for 84 per cent of its incomes on these oil revenues.
3.5 Oman

Oman, situated in the south east of the Arabian Peninsula, has an area of 300,000 square km. The capital is Muscat. The total population is assessed at 1.2 million people. More than 300,000 people live in the capital territory. Approximately one sixth of the total population consists of foreigners.

Oman is a rather small oil producer. In 1983 it produced 137 million barrels whilst the production of Saudi Arabia was 1.8 billion barrels in that year. Nevertheless, from 1972 onwards the average contribution of the oil sector to Oman's GDP is 60%. In 1975 an economic planning was started with the establishment of a council and a law on economical development. Also five year plans have been formulated.

The recession in the oil industry did not seem to affect Oman as much as other Gulf countries. This has two reasons: Oman has conducted a careful policy with regard to expensive projects, and secondly, it is not a member of OPEC, which implies that it is not tied down to production limitations. Thus, it could raise its production when the oil price declined.

Although Oman is less rich than the other Gulf countries, still it is a prosperous country.

3.6 Qatar

Qatar is an independent state located in the eastern side of the Arabian Peninsula. It has a total area of 11,600 km² and a population of 389,000 (1986) of which 73 per cent are foreigners (Hilgeman, 1988). The capital of the country is Doha, where more than half of the total population lives. Other main towns are: Umm Said, Al Khor and Ar Ruays.

In 1986 the ratio of oil export/total export of Qatar was 90.7 and the oil contribution to the total government incomes amounted 83 per cent in the period 1985-1986.

Qatar has extremely large deposits of offshore natural gas. It owns a growing petrochemical and steel industry, a fertilizer factory and many new plants for different products. In addition, Qatar unfolds from the 1960s on, much more activities in the fishery, animal husbandry and agriculture fields, generally supported by the oil revenues.

3.7 Bahrain

Bahrain is the smallest Gulf country. It has an area of only 662 km². The capital is Manama. It is an independent country since 1971. Bahrain was the first state in the Gulf area to exploit and export oil in 1932. At present the population of Bahrain is approximately 434,000 of which 32% are foreigners.
Public revenues have been used to a large extent for the infrastructural and social development. Health service is free, house building and public transport are partly subsidized by the state. In Bahrain 96% of the people belong to the Islam.

Economically Bahrain is more diversified than the other Gulf states. The contribution of the oil sector to GDP is 20%, whereas in most other Gulf countries this is more than 35%. Bahrain has a big dry-dock facility, an aluminium smelter, large oil and gas refineries, telecommunication enterprises and offshore banking as well as a sophisticated marketing system heavily associated with import/export trading of foodstuffs and Bahrain can be considered as a good commercial centre of the Gulf region (Beaumont & McLachlan 1985).

The government is placing increasing emphasis on the non-oil and the private sector with regard to the GDP growth. Thus a further diversification of the economy is considered as the main objective. For this reason as well as to decrease the dependency on food imports, agricultural production is stimulated.
4. Agricultural growth in the Gulf states

4.1 General

In recent years the Gulf countries have made strong efforts to diversify their economies in order to be less dependent on the sector has been one of the major objectives within the diversification policy. In addition to the diversification target there was another reason why so much emphasis was placed upon the agricultural sector. Since the oil boom started, the Gulf countries have become extremely dependent on food imports. The poorly developed local agricultural sector could on no account meet the increased domestic demand which resulted from the rapid growth of the population and the enhanced purchasing power. Therefore the major reason to develop the agricultural sector and hence to increase the production was the endeavour to enlarge the selfsufficiency rate. In terms of production, the achievements in the Gulf states are amazing. For many products the selfsufficiency rates went up from scratch to a significant percentage within a decade's time.

When studying the success of the agricultural production, some severe problems come to light as well. As explained before, the Arabian Peninsula is mainly composed of desert with a very unfriendly climate that is not particularly suitable for agricultural activities. The major problems are the poor soil quality and the limited water resources. In order to enable crop production the soil has to be washed out with huge quantities of water to decrease the salinity. Agriculture therefore is a very costly activity and the limited water resources are used rather inefficiently.

Another important point is that the agricultural sector is built up mainly with foreign labour. Most of the producers and land owners in the region do not consider themselves as farmers and, generally, they are not directly involved with the production process. Therefore, those production units frequently lack experienced manpower after the departure of the skilled expatriates.

4.2 Saudi Arabia

4.2.1 Introduction

Agriculture in Saudi Arabia represents one of the most interesting and revolutionary developments of the region in the last two decades. Traditional agriculture was replaced by a well developed agricultural sector. In production terms, the country
is nowadays selfsufficient in agricultural products such as wheat and eggs. Taking into account the climatical conditions and the environmental constraints, this is a great achievement. On the other hand, this achievement was obtained through large offers in terms of governmental investments, subsidies and many other incentives generated by the oil revenues.

The main problems Saudi Arabia meets in regard to water are: deficiency in rainfall; finity of available water; salinity and waterlogging; and, the location of areas with the potential of agricultural expansion. Large utilisation of desalinated water is restrained by the high costs. Although the calculated suitable soil for cultivation in Saudi Arabia totalled at least 4.2 million ha, the water limitation prevents a larger usage than the 800,000 ha which are presently in cultivation. The cultivation areas are concentrated around the main cities, especially Riyadh.

4.2.2 Policies

The government has followed a heavy financing programme in the last two decades. Up until now the authorities have made four five-year plans. The second plan (1975-1980) included the main purposes of the agricultural development, which can be summarized as (Aal Khalifah 1982): increasing the selfsufficiency level; improving the pastures and forests; developing the fishery capacity and industry; and, developing the water resources and ensure a rational usage of it.

In terms of incentives, the government conducted a programme with three clear aspects. The first one relates to the interest-free loans the government made available especially since the establishment of the Saudi Arabian Agriculture Bank in 1965, which supported farmers and land holders with the required funds. The total sum of governmental loans which amounted 16.6 mln SR in 1970 expanded into 1,128 mln SR (310 mln US dollar) in 1980. This number even manifolded many times in the Third Plan (1980-1985) under which the governmental loans increased to 5 billion SR (1.4 billion US dollar) (Jamal 1985).

The second aspect concerns the agricultural subsidies of which the gross amount increased from 9.7 mln SR in 1974 to 436 mln SR (119 mln US dollar) in 1980. In the Third Plan (1980-1985), the private sector received government loans of 2.5 billion SR (0.7 billion US dollar). Table 4.2 shows the actual governmental subsidies for agricultural production.

The third aspect of the agricultural development programme deals with the land grant policy, which has been followed since 1968. By this policy land ownership is granted to the person who cultivates at least 25 per cent of the total area, provided to him by the agricultural authorities, and within an average period of five year. This resulted in a total area of 117,221 ha of land granted to 15,800 persons and 65 projects in the period 1968-1980.
Table 4.1 Governmental subsidies in Saudi Arabia for agricultural production

<table>
<thead>
<tr>
<th>Type</th>
<th>Subsidy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production input:</td>
<td></td>
</tr>
<tr>
<td>- Fertilizer</td>
<td>50% of cost</td>
</tr>
<tr>
<td>- Animal feed</td>
<td>50% of cost</td>
</tr>
<tr>
<td>- Potato seed</td>
<td>5 tons free</td>
</tr>
<tr>
<td></td>
<td>SR 1,000/ ton thereafter*</td>
</tr>
<tr>
<td>Machinery &amp; equipments:</td>
<td></td>
</tr>
<tr>
<td>- Poultry equipment</td>
<td>30% of cost</td>
</tr>
<tr>
<td>- Dairy equipment</td>
<td>30% of cost</td>
</tr>
<tr>
<td>- Engines and pumps</td>
<td>50% of cost</td>
</tr>
<tr>
<td>Output</td>
<td></td>
</tr>
<tr>
<td>- Wheat</td>
<td>1.5 SR/kg guaranteed price**</td>
</tr>
<tr>
<td>- Barley</td>
<td>1 SR/kg guaranteed price**</td>
</tr>
<tr>
<td>- Rice</td>
<td>SR 0.30/kg</td>
</tr>
<tr>
<td>- Corn</td>
<td>SR 0.25/kg</td>
</tr>
<tr>
<td>- Dates</td>
<td>SR 0.25/kg</td>
</tr>
<tr>
<td>- Date palm planted</td>
<td>50 SR/palm</td>
</tr>
<tr>
<td>- Sheep &amp; goat</td>
<td>30 SR/pice</td>
</tr>
<tr>
<td>- Camle</td>
<td>80 SR/pice</td>
</tr>
<tr>
<td>Transportation:</td>
<td></td>
</tr>
<tr>
<td>- Air trans. of cows</td>
<td>100% of costs</td>
</tr>
<tr>
<td>- Export transport of vegetables</td>
<td>1.5 SR/kg**</td>
</tr>
</tbody>
</table>

Sources: Aal Khalifah 1982; *) 1 US dollar = 3.6 SR; **) Deduced from Brouwer 1989.

The recently diminished public revenues due to the fall of the oil export prices have placed the governmental stimulation programmes in Saudi Arabia under considerable pressure. The volume of loans and subsidies by the Saudi Arabian Agricultural Bank has clearly declined since 1984/85, as table 4.2 indicates. According to Brouwer this decline must be explained by a more critical attitude of the authorities towards the proposed investments and the introduction of sharper conditions on the loans. Moreover, the fall of the exchange rate of the SR against the non-US-dollar currencies, seems to have lowered the profitability of investments and hence scared potential investors (Brouwer 1989).
Table 4.2 Loans and subsidies by the Saudi Arabian Agricultural Bank, 1984/85 - 1987/88, mln SR

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Loans:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Watersupply</td>
<td>1,345</td>
<td>757</td>
<td>554</td>
<td>431</td>
</tr>
<tr>
<td>Agricultural projects:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poultry</td>
<td>77.8</td>
<td>127</td>
<td>76</td>
<td>21</td>
</tr>
<tr>
<td>Wheat &amp; roughage</td>
<td>151</td>
<td>353</td>
<td>164</td>
<td>182</td>
</tr>
<tr>
<td>Greenhouses</td>
<td>118.2</td>
<td>73</td>
<td>17</td>
<td>34</td>
</tr>
<tr>
<td>Dairy farms</td>
<td>48</td>
<td>15</td>
<td>12</td>
<td>8.5</td>
</tr>
<tr>
<td>Agricultural equipment</td>
<td>315</td>
<td>150</td>
<td>150</td>
<td>126</td>
</tr>
<tr>
<td><strong>Subsidies:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pumps</td>
<td>386</td>
<td>241</td>
<td>217</td>
<td>148.5</td>
</tr>
<tr>
<td>Machinery</td>
<td>286</td>
<td>199.7</td>
<td>167</td>
<td>108</td>
</tr>
<tr>
<td>Transport of cows</td>
<td>11</td>
<td>14.5</td>
<td>11</td>
<td>4.5</td>
</tr>
<tr>
<td>Poultry equipment</td>
<td>15</td>
<td>.13</td>
<td>9</td>
<td>3.5</td>
</tr>
<tr>
<td>Feed</td>
<td>710</td>
<td>534.8</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total subsidies</strong></td>
<td>1,377</td>
<td>993.8</td>
<td>404</td>
<td>264.5</td>
</tr>
</tbody>
</table>


4.2.3 Production

- **Wheat and barley**
  In order to increase the local production of wheat, the authorities started to offer the farmers a guaranteed price of 3.5 SR/kg. The rapid growth in production from 125,000 tons in 1975 to 2,800,000 tons in 1988 pushed the authorities towards diminishing this price to 2 and later to 1.5 SR/kg. The fact that the total local demand of Saudi Arabia amounted to a quantity of 800,000 tons in 1988, means a surplus of two million tons. This has been partly exported to the EC, as well as to other countries like China, Russia and some islamitic countries. On the other hand, in the same year Saudi Arabia market demands 8 million tons of barley of which only 200,000 tons were produced locally. This motivates the Ministry of Agriculture to maintain supporting farmers with a unchanged guaranteed price of 1 SR/kg produced barley (Brouwer 1989).

- **Dairy and eggs**
  Official statistics of the Ministry of Agriculture show an expansion in the fresh milk production from 4,000 tons in 1976 to 166,000 tons in 1986. One of the most significant developments in this sector is the establishment of the cooperative organization United Dairy Farms with its 21 member companies. This cooperation
is responsible for the collective purchase of inputs as well for
distribution and marketing of the production. The total dairy
products which Saudi Arabia imported in the abovementioned period
increased from 70,000 tons to 195,000 tons, of which the EC sup­
plied the lion's share.

The egg-sector produced almost 500 mln units in 1978 and in
1981 750 mln units which meant a selfsufficiency rate of respec­
tively 65% and 76.4%. At present, the egg market of Saudi Arabia
can be considered as locally satisfied and even some export of
Saudi eggs to other Gulf states occurs.

- Meat

Concerning chicken meat, Saudi Arabia produced 14 mln birds
in 1975. Seven years later, the local poultry production amounted
45 mln birds. This growth continued forward and production rea­
ched a quantity of 197,000 tons in 1987, which covers 60% of the
domestic consumption. The dynamic movements within the chicken
meat business, the fluctuations in meat and feed-stuff prices and
the heavy subsidies in this sector provided by the government,
cause an unstable competition not only with overseas production
but also within the GCC countries. Furthermore, an expected pro­
duction expansion in this sector might cover the demand for chic­
kens, for egg production and maybe for poultry meat production,
locally within few years.

Red meat production of Saudi Arabia totalled at 22,200 tons
in 1986.

- Vegetables and fruit

The area cultivated with vegetables increased from 21,000 ha
to 31,000 ha in the period 1976-1980. In this period the gross
production rose from 283,000 tons to 377,000 tons. In recent
years growth went up again very rapidly and a total yield of
1,080,000 tons has been reached in 1987. This was partly the
result of the establishment of many new farms, the larger appli­
cation of greenhouse cultivation and the establishment of some
marketing and management organizations, like Thimar and
Safragrex, which support the producers through both purchase and
sale processes.

The growth of fruit production in the same period was rea­
sonable but less firm than in the vegetables sector. In terms of
cultivated area, the acreage under fruit-culture increased from
19,000 ha in 1976 to 28,000 ha in 1980. These figures only in­
clude the main fruit crops; melon, grapes and citrus. In weight
terms, production of these crops expanded in the mentioned period
from 225,000 tons into almost 260,000 tons. In 1980, the area
cultivated with date of 68,000 ha produced 441,000 tons. The
fruit yield of Saudi Arabia rose up to 596,000 tons in 1987
(Bowens-Jones & Dutton 1983; Almohandes Alzirai 1989).
4.2.4 Perspectives

Agriculture in Saudi Arabia has obtained many goals in a short time. However, the rapid horizontal expansion of the last decade in the Saudi Arabian agriculture is going to be milder. A growing tendency towards commercializing many agricultural projects and enterprises comes from the government as well as from the private sector.

Furthermore, the seasonal production peaks of agricultural crops and the absence of sophisticated marketing and processing facilities cause a significant fall in the price of many agricultural commodities. Anyhow, it is the intention of the Saudi's to develop their storage and processing capacities in the near future.

Further possibilities for expansion in the agricultural sector are to be found where the water demand per unit production can be decreased or restricted. In this respect modern irrigation systems, greenhouses and the intensive animal husbandry are promising methods.

4.3 Kuwait

4.3.1 Introduction

In Kuwait the most suitable soils for agriculture lie in a zone extending south west and south from Kuwait Bay. Here the agricultural areas Sulaibiyah and Umm al Negga are to be found. In general the salinity is very high which makes most soils unsuitable for arable farming. This high salinity makes it necessary to wash out the soils with large quantities of water before the crops can be grown. Only 20,000 ha are useful for agriculture under irrigation (Hilgeman 1988).

Water is a very scarce resource in Kuwait. Annual rainfall varies from a mean of about 140 mm on the coast to less than 80 mm in the interior. Rainfall is far from sufficient for agriculture, therefore other water resources need to be used as well. Although there is sufficient ground water, it is mainly brackish and not suitable for irrigation. In Kuwait people hope that the plan to tap water from the Shatt al Arab and to pump it through pipes to Kuwait in order to supply the necessary water for agriculture will be executed.

4.3.2 Policies

In recent years the Kuwait government has pursued a vigorous stimulating policy with regard to agriculture. For the period 1982-1986 the Department of agriculture drew up a plan to increase the agricultural production by expanding the area in glasshouses to 450 ha and enhancing the area suitable for growing
vegetables from 1,500 ha in 1981 to 3,500 ha in 1986. The plan succeeded quite well. In 1986 more than 4,000 ha was under cultivation.

In 1983 the Public Authority for Agriculture and Fisheries was established to encourage and direct the expansion of local private commercial production. The strategy was increasing the amount of land and water for agricultural use, experimenting with methods and products to broaden the production and extending the infrastructure and support services (Arabian Agricultural Yearbook 1989). As a result a 20 year plan was introduced in 1984. To the above mentioned targets it added the establishment of a marketing company for agricultural products and enhanced financial and material aid for farmers.

In the current five year plan strategic food production is no longer the main priority. Agriculture has to be economically viable in the future and hence the authorities aim for privatization of the agricultural sector. However, there is only little initiative in the private sector. Over and above that agricultural labour is in short supply. The plenitude of other opportunities for employment and investment in other more rewarding sectors discourages serious interest in agriculture.

The government provides various incentives and services to help expanding and developing the agricultural activities. In order to make it attractive for private investors, subsidies to reduce cost of credit and all kinds of inputs such as animal feed, equipment, fertilizers etc. are available in order to make the agricultural production economically feasible. Also much attention is paid to fishery. The main objective is to expand and improve the fishing fleets.

Further, research conducted by the Kuwait Institute for Scientific Research, sometimes in co-operation with foreign institutes or universities, provides knowledge and technology specifically destined for agriculture and fishery under arid conditions. There is an experimental farm in Omariya and several experimental stations which fulfil the task of an extention service and hence promote the use of new techniques, irrigation methods and knowledge. The Kuwait Institute for Scientific Research is also involved in a fishfarming project.

4.3.3 Production

The livestock sector contributes the largest share to the agricultural output. The dairy farms contribute a significant share to the local consumption, about 25%. The egg production is approximately 230 million per year, which is 50% of the domestic demand. The production of chicken meat is 20,000 tonnes per year and meets 40% of the domestic demand.

Production of meat is mainly based upon feedstuff imports. The figures for 1986 were as follows: beef and veal 6,000 tonnes; mutton 32,000 tonnes; goat meat 2,000 tonnes. The local mutton
and goat meat production, that is not dependent on feedstuff imports was 8,000 tonnes.

As for tomatoes Kuwait is selfsufficient. In the winter season even surplusses occur which are exported to other middle east countries. The vegetable production meets circa 35% of the domestic demand. In 1985 the date production was 2,000 tonnes. The strawberry production is increasing and sometimes surplusses have to be exported. Further citrus fruit, figs and bananas are grown at a minor scale. The potatoe production has increased considerably. In 1987 162,000 kg seed potatoes have been imported.

4.3.4 Perspectives

The future for the agricultural sector in Kuwait is rather problematical. The inferior soil quality, the shortage of sweet water and the unfavourable weather conditions on the one hand and the commercializing strategy of the government on the other hand do not provide a stimulating environment for agricultural growth.

The chicken meat and egg production will offer the best prospects. The production of these commodities is fairly controllable, whilst the selfsufficiency rate is only 40 to 50%.

The milk and meat production will continue to be dependent on fodder imports. In addition huge investments are required in order to enable the production of these products under the extreme climatic conditions. Goats and sheep thrive better in the hot and dry climate but a lack of productive grazing land does not allow a significant production.

The fishery sector can be further expanded and improved. A modernization of the fishing fleet will enlarge the catches and hence an increase of exports is possible. Also the end of the Iran-Iraq war can stimulate the fisheries sector, as the fishing activities will be safe again.

As for crop production the salinity problems will only increase. In addition the short growing season causes surplusses in a short period of the year. Hence in the rest of the year Kuwait will remain to be dependent on imports. The Shatt Al Arab project could improve the prospects for crops production significantly. Then, sufficient water can be available in order to wash out the salt in the soil to deeper layers.

4.4 United Arab Emirates (UAE)

4.4.1 Introduction

In the 1960s the, what is now called, UAE seemed to have 2,500 units of farming, mainly concentrated in the areas Ras al Khaimah and Al Ayn and some others located by the major oases in the region. This number increased gradually to more than 9,000 units in 1978. Landutilisation in agricultural holdings increased
from 12,600 ha in 1973 to 21,600 ha in 1978 and to a little more than 30,000 ha in 1987 (Hilgeman 1988). This growth was stimulated by the governmental incentives and its land grant policy (such like in Ras al Khaimah) as well as by the increasing demand for agricultural commodities in the expanding towns, like Abu Dhabi and Dubi.

As in the whole Gulf area, water will remain the most defeating factor for any further agricultural development of the country. Annual precipitation is approximately 50 mm in the desert and 150–200 mm in the Hajar area. This rainfall used to be enough to cover water demand until 1960. In the following years, water demand went up very rapidly to more than two times the water supply from the rain. The consumption of water was equal to 565 mln m$^3$ in 1982, while the quantities of water supplied by rain and desalination of sea water amounted to only 210 mln m$^3$. The remaining deficit of 355 mln m$^3$ was taken from the fossil water which, at this rate of consumption, might last for only 20 years (Bowen-Jones & Dutton 1983). The great demand for water in Al Ayn region has led to the situation that Al Ayn district nowadays gets its drinking water through a pipe line from Abu Dhabi (Hilgeman 1988).

Merely 20 per cent of the cultivated area in the UAE is equipped with modern irrigation systems. Salinity of soil and water is the biggest problem and occurs especially in Ras al Khaimah and Fujairah.

### 4.4.2 Policies

The government and agricultural authorities in the UAE made a three year plan for the agricultural sector developments in the beginning of the 1980s. This and other government programmes intend to diversify and enrich the economy of the country with new and renewable funds. The government aims to obtain a higher level of selfsufficiency in agricultural commodities, especially vegetables.

The programme for agriculture has two distinct aspects. The first relates to research centres and stations which were established to provide farmers and projects holders with knowledge and information. A good example of these is the Abu Dhabi Arid Land Research Center in Sadiyat island which deals with production of vegetables under controlled climatical conditions. Other main experimental stations and farms are located at Rawayn in Dubi, Digdagga in Ras al Khaimah and AL Ayn in Abu Dhabi which is mainly responsible for the application of sophisticated irrigation systems.

The second aspect concerns the subsidies and incentives offered by the government to encourage the producers. These subsidies include all fertilisers, pesticides, seeds, irrigation and fencing equipments for 50 per cent. Abu Dhabi Emirate takes a leading prominent role in this concept by providing all these
means of production, except fertilizers, free of charge. Beside this, all wells available for farmers in the whole federation are free. Some speak of a total subsidy of 15,000-20,000 Dh a year which is equal to 4,087-5,450 US$ paid by the federation government for each cultivated ha (Bowen-Jones & Dutton 1983).

4.4.3 Production

Production of horticultural and arable farming in the period between 1979 and 1985 increased sixfold. In the winter, the UAE can be considered as self-sufficient in the vegetables sector. In 1986 the produced quantities of the most important vegetables were (in thousand tons): tomatoes 160; watermelon 70; cucumber 29; cabbage 26. The fruit production of the same season was (in thousand tons): dates 50; citrus 5.6; mango's 3.7 (Hilgeman 1988). The agricultural authorities purchase this production against weekly fixed prices which are liable to supply and demand.

Whilst the Federal Ministry of Agriculture in Dubai had stopped the subsidies for the last few years, the Department of Agriculture in Al Ain subsidizes all production inputs for potatoes. Because of the water shortage, only the farmers who are equipped with sophisticated irrigation systems are provided with seed potatoes. The import of these seed potatoes increased from 322 ton in 1981 to an estimated quantity of 700 ton in 1987. The Netherlands supplied the biggest part (450 ton), France the rest (250 ton) (Hilgeman 1988).

The federation produced 10,400 ton of red meat and 12,400 tons of chicken meat in 1987 (Almohandes Alzirai 1989). It is expected that the UAE will be self-sufficient in poultry sector in 1990, but the price competition from outside is strong. Local production of chicken meat costs 2,500 US$ a ton, whilst the price of imported meat is almost half of it.

Dairy production showed an increase of 35 per cent in the period 1979 to 1985. The average costs of local production for one liter milk is 1 US$. The average milk production per cow does not exceed 4,000-4,500 kg. The UAE import approximately 60 per cent of the dairy products which they consume. A growth in the domestic fresh milk production is expected in the near future.

The fish haul in the federation reached 84,000 tons in 1987. By this, the UAE took the second place in fish production by the Gulf states, after Oman which produced 100,000 tons in the same year (Almohandes Alzirai 1989). The main production is concentrated in Ajman and Umm al Qwain and the self-sufficiency rate of the federation in this field is 25 per cent. The authorities do not seem willing to increase this rate in the near future (Hilgeman 1988).
4.4.4 Perspectives

The considerable growth in the agricultural sector of the UAE in the last years is the result of a large number of efforts provided by both the authorities and the private sector. The agriculture seems to continue its expansion in many fields in the foreseeable future. The vegetables sector might achieve a bigger assortment very soon. Partly this will be the result of a large surplus in tomatoes and cucumbers; especially in the winter months. A large growth in potatoes and onion production is also expected. Probably the same probably holds for dairy and poultry production. In order to obtain more improvements in the agricultural fields, the UAE is paying more attention to applied research, water management, marketing and processing of agricultural products.

4.5 Oman

4.5.1 Introduction

In Oman agriculture is restricted to a few regions. From the total of Oman's 300,000 km² circa 56,000 ha is suitable for agriculture. At present approximately 40,000 ha is in agricultural use. There is no sufficient rainfall for dry farming.

The most important agricultural region is the Batinah coastal plain. It is a strip of arable land with a length of 250 km and a maximum width of 4 km. It has an area of about 45,000 ha. In this narrow zone, the ground water which is transported from the Hajar mountains via the wadis, is pushed to the surface by the sea water that shoves underneath.

Due to the very sparse natural vegetation, soils in Oman have a low organic matter content and are very poor in nitrogen and other necessary plant nutrients. In addition they are very vulnerable to water and wind erosion. The salinity of the soil forms the major problem. Therefore it is essential to apply sufficient water of good quality to provide the plants as well as to wash out the salt.

In the Hajar- and Dophar mountains animal husbandry contributes the major part to agricultural production. In the Hajar mountains it mainly consists of goat and sheep farmers, in the Dophar mountains Jebali shepherds wander about with their cattle. Arable farming is spread over all agricultural areas. The main products are dates, which occupy half of the arable land, mango's, dry limes, bananas, alfalfa, sorghum and water melons.

Dates, limes and fish used to be important export products for Oman. In the 1950s Oman exported an annual average of 9.3 mln OR of dates, 8.5 mln OR of fish and 1.8 mln OR of limes. Some other agricultural exports were fruits, vegetables, hides, goat hair and wool, tobacco and manufactures. These exports, with the
exception of limes, declined in value after the mid-1950s. The oil wealth in the other Gulf countries plus the falling prices of the agricultural products induced people to move to the Muscat region. As a result the fields and irrigation systems were neglected. The agricultural production and export declined further. Only limes still form a significant agricultural export product.

4.5.2 Policies

Objectives and goals were set out by the Development Council in 1975 and later the first five year plan (1976-1980) was introduced. Agriculture plays an important role within the whole of the five year plan. It is the government's objective to stimulate the rural development in order to raise the selfsufficiency rate of food and to stop migration to the urban zones. Employment in the agricultural sector has to be safeguarded, the area of suitable agricultural land has to be extended and the production must be intensified. The realization of these targets must help to end the decline of farm incomes.

In the first five year plan, of the total planned public sector capital investment of 935 million OR, 26.6 million OR (2.8%) was available for agriculture and irrigation. The plan hoped for an additional 16 mln OR investment from the private sector. The main objectives were to increase the crop value by 140 per cent, to increase livestock production by 165 per cent and to reclaim 20,000 ha of agricultural land. However the objectives have not at all been met. Part of the money was spent in low productive, non-economic farm enterprises. The extension service did not fulfil its tasks properly and only half of the development allocation was spent (Bowen-Jones & Dutton 1983).

In the second five year plan for all the productive industries including agriculture the Development Council emphasized a strong and stimulating push to the private sector. An amount of 100 mln OR was allocated to the Ministry of Agriculture and Fisheries, 15 mln OR to grants for small enterprises, 19 mln OR to a new agriculture and fisheries bank, 10 mln OR to the development bank of Oman and 18.5 mln OR to provide agricultural inputs to farmers (Beaumont & McLachlan 1985).

Incentives by means of subsidies, loans and extension service were made available for private enterprises. Subsidies on inputs are examined very carefully in order to stimulate the private initiative and hence to restructure the agricultural sector in the best possible way. The government is also interfering in the marketing process by means of The Public Authority for Marketing Agricultural Produce. It has set up six distribution and collection points and has set up organized sales in Baushar, Suwayq, Suwar, Nizwa, Ibra and Salalah. Farmers receive fair prices for their products and are stimulated to produce more and of better quality. Further the authorities have imposed import
duties for some locally producible goods in order to protect the farmers against cheap products from outside of the GCC. The Ministry of Agriculture continues to improve its inventory of land and water resources.

4.5.3 Production

At present the agricultural situation in Oman has slightly improved compared with ten years ago. In 1987 the growth of crop production had increased 8% with respect to 1986. The total crop production, mainly vegetables and fruits, was 391,000 tonnes in 1987. In 1986 Oman had the highest fish production of the Gulf countries. The total production was 103,000 tonnes (Almohandes Alzirai 1989).

4.5.4 Perspectives

Among the Gulf states Oman offers the best opportunities for agricultural development. In the Batinah coastal plain sufficient ground water of reasonable quality is available. The introduction of modern technology will make high yielding crop production of good quality feasible. In the Dophar region the well spread rainfall enables cattle grazing on the mountain slopes. An extensive animal husbandry system could be an economic activity when the appropriate varieties of cattle, sheep and goats are introduced.

The success of the agricultural development is to a large extent dependent on a good extension service, for the farmers are mostly not educated. Also a well functioning marketing system which enables an efficient produce outlet is necessary. The current development of collecting and selling locations is hopeful in this respect.

4.6 Qatar

4.6.1 Introduction

Agriculture in Qatar consisted, until the oil-boom, of some date gardens mainly located in the rodas along the northern coast and a few hundred pastoral bedouins living with their flocks on the vegetation in the scattered rodas, moving from one to another, and crossing the Saudian border. Beginning in the 1950s, oil wealth stimulated the application of pump well technology, made money available for investment in the agriculture sector and created the possibilities for further agricultural development. This resulted in a growth of the cultivated area from 380 ha in 1958 to 3,400 ha in 1970 and again to 7,000 ha in 1988 (Beaumont & Mc Lachlan 1985; Lancaster 1988). Agriculture, which is heavily dependent on ground water, was consuming 30 million m³ of water in 1970. In 1980 agriculture required 57 mln m³ of ground water.
The sum of water consumption, caused by human abstraction, evaporation and loss in the sea amounted to 79 mln m³ in that year. At this exhaustion rate, Qatar’s aquifers can be depleted within 30 to 50 years (Bowen-Jones & Dutton 1983).

Some say that Qatar is a perfect example of what can be achieved with time, money and dedication to the agricultural development goal. However, three main remarks must be made with regard to agriculture in Qatar. The first one is that the agricultural sector still has a mean contribution of 1.2 per cent in the gross domestic production of the country. The second is that agriculture in Qatar is facing, as in other Gulf states, many problems concerning water availability and salinity, infertile soil and shortage in labour. The third remark relates to the high expenditures offered by the government to obtain those developments and the fact that the future of farming is totally dependent on state policy.

4.6.2 Policies

Under the auspices of the Ministry of Industry and Agriculture, Qatar implemented a nine-point agricultural development programme in 1970. This aims to increase the self-sufficiency rate of vegetables, fruit and animal production. The Ministry supplied the producers of agricultural commodities for already more than a decade with heavy subsidies (Hilgeman 1988).

In order to cover the manpower demand in Qatar, the majority of the current population of the country consists of foreigners. The unskilled and semi-skilled workers, mainly from Pakistan and southern Iran supplied the biggest part of this manpower in the agricultural sector. Somewhat more skilled and experienced Arabs and Persians became tenant farmers and some others became contract managers in the farms (Bowen-Jones & Dutton 1983).

4.6.3 Production

In 1986, the gross value of agricultural production was 318 mln QR, which is equal to 87 mln US dollar. The shares of the different sectors were: dairy products 28%, vegetables 24%, green fodder 21%, fruit 7% and fish 5%. On the other hand the foodstuff importation bill amounted to 630 mln QR in 1985 (173 mln US dollar) (Hilgeman 1988).

Much attention has been paid to the development of the dairy sector; it now covers 28 per cent of the total agricultural production. This production is delivered by a small number of large farms with 600 to 1,200 cows each. In Qatar the total livestock, responsible for dairy production, consists of 5,000 cows and almost 115,000 goats and sheep (Hilgeman 1988).

Qatar produced 2,000 tons of chicken meat and 950 tons of eggs in 1986. The total poultry stocks of Qatar is estimated on 1.5 mln chicken for both meat and eggs production to cover 60 to 70 per cent of the local demand.
Fish production of Qatar is quite important with regard to the local consumption pattern of meat. The haul of the last few years remained around the two thousand tons a year. This production is, for the biggest part, delivered by the private fishers. The government supports its own companies in this field and protects the fishery sector and its adjunct industry.

Besides chicken meat and fish, Qatar produces yearly approximately 2,000 tons of sheep and other red meat. In 1986, the total meat production of this state amounted 42 mln QR (11.5 mln US dollar) (Hilgeman 1988).

The total gardening area of Qatar is divided as follows: vegetables 37%, fruit 36%, fodder 12.6% and grain 14.4%. This sector provides the country with a self-sufficiency rate of 70% in summer vegetables and some 40% in winter vegetables. In stead of the little production assortment in the past, nowadays Qatar produces many new crops such as bananas, oranges, apples, figs, grapes besides the main vegetables crops like tomatoes, potatoem, egg plants, cucumber, carrots and onions (Lancaster 1988).

4.6.4 Perspectives

Thanks to the governmental encouragements, agricultural development will probably continue. The Ministry of Industry and Agriculture initiated for instance a great research project concerning a data bank which should deal with agricultural aspects such as soil condition and water management.

In regarding to production volume, the future promises progress in dairy, poultry and vegetables production. However, Qatar still needs to import technology and know-how. For cooperation with foreign companies, Qatar, as well as other Gulf States, seeks a good solution in joint ventures for the near future.

4.7 Bahrain

4.7.1 Introduction

Of the total area less than 10% (6,000 ha) is suitable for agricultural use. At present circa 3,500 ha is in agricultural use. As a result of the high temperatures and the low rainfall (75 mm per year) rain fed agriculture is not feasible. The soils in Bahrain are mostly composed of silty sand and sandy loams. They have a low water holding capacity and high water table logging, resulting in low fertility and high salinity (Bowen-Jones & Dutton 1983).

Agriculture depends on irrigation and ultimately on aquifers which origin in Saudi Arabia. The ground water is brackish; it contains 5,000 to 11,000 ppm salt, and even the surface water has a high salinity, circa 2,500 to 7,000 ppm. This forms a major obstacle for agriculture as many crops and animals are suscep-
tible to high salt concentrations. There is a tendency of a declining water quality due to excessive use and further penetration of the sea water. The annual water consumption is approximately 160 million m³ of which 70% is used in agriculture (Hilgeman 1988).

The system of landlords and tenancy in Bahrain has inhibited agricultural development for several decades. The short term tenancy formed an obstacle for tenants to improve and expand their farm businesses. Very little attention had been paid to agriculture until the late 1970s. Up to the early 1970s, there was a steady decline in the agricultural labour force resulting from the combination of low water quality, easy food imports, land loss to urban growth, more jobs in other sectors and the low returns in agriculture. Therefore more people were turning to an urban life style or retaining their gardens for non-commercial use (Bowen-Jones & Dutton 1983).

4.7.2 Policies

The government is emphasizing the agricultural development. In the five year plan 1982/87 78 mln US dollar has been assigned to agriculture. One of the main objectives is to increase the quality and quantity of the water supply. In addition new agricultural techniques should be introduced (sprinklers, drip irrigation) to reduce water usage. To this end investments are subsidized by the authorities for 40%. Since 1987 45,000 m³ purified sewage water is daily available for agricultural use (Hilgeman 1988).

Another major goal is the enhancement of the selfsufficiency rate with regard to agricultural products from 6 to 15%. Particularly emphasized are the fruit, vegetable and poultry sectors. Farmers can obtain soft loans from the Arab Agricultural Investment Company up to 80,000 US dollar in order to increase their production and improve the quality. Subsidies up to 50% are available for seed, fertilizers, pesticides, veterinary services, plastic tunnels and other agricultural equipment (Hilgeman 1988).

4.7.3 Production

The fruit tree area is declining due to climatic difficulties and water quality problems. The total annual yield of dates is 10,000 to 15,000 tonnes which is not enough to meet local demands. In Mina Sulman a date processing plant has been built which produces dried and deep frozen dates.

Tomatoes contribute the largest share to the vegetable production. Further cucumbers, lettuce, marrows, cantaloupes, radishes, okra and onions are grown. The Budaiya experimental station is conducting research in hydroponics in order to enhance the growing season and to use the water more efficiently.

The number of poultry farms has increased rapidly. The General Poultry Company owned by the Department of Agriculture
produces 20 million eggs per year which is 40% of the domestic demand. In addition 35 private farms produce 7.5 mln eggs and 1.25 mln meat chickens per annum. Further there is a feedmill and slaughtering and processing plant. In the chicken meat sector there is much competition from Brasil and France (Hilgeman 1988).

Milk production only really started in 1977 when the Department of Agriculture established a dairy farm at Al Hidd on Muharraq island. Nowadays Bahrain has six dairy farms with 200 to 600 milking cows per farm. In 1985 the Bahrain National Dairy Co-operation was founded in which the authorities are shareholder for 20%. Although the government's aim was to reach a selfsufficiency ratio of 40%, actual milk production only meets 10% of the domestic demand. The major part of the imported milk is recombined.

Since the 1970s very little advance has been made with the breeding of sheep and goats. Still large quantities of meat have to be imported.

The completion of the highway to Saudi Arabia has stimulated the trading activities in Bahrain as well as the production of vegetables and poultry. The Saudian market became much easier attainable. However, since the Bahrain market became within easy reach for the Saudian subsidized egg industry as well, the egg production in Bahrain has diminished.

4.7.4 Perspectives

Of all the Gulf countries, Bahrain is the least suitable for agricultural production. The very high salinity of the soil and the limited rainfall make agricultural production extremely difficult and costly. The present water withdrawal from the deeper layers for consumptive and agricultural use has already caused a further penetration of the sea water into the isle. Therefore a thrifty water use must have the first attention.

For crop production enormous quantities of water are required in order to wash out the salt. The purified sewage water project however provides some prospects. The enhancement of the vegetable and chicken meat production will probably continue as a result of the governmental incentives and the completion of the highway with Saudi Arabia. The strong development of the Saudian agricultural sector will probably increase the competition on Bahrain market.
5. The Gulf cooperation council and the European community

5.1 The Gulf Cooperation Council (GCC)

5.1.1 Introduction

Taking into account the geographical, historical and economic relations between the six Gulf states and the successful achievements of the EC in the cooperation of its member states, the Gulf states more or less attempted to follow this success by establishing the Gulf Cooperation Council in Riyadh on the 11th of November 1981. The main goals of this formation are to achieve closer relations and stronger links. According to the Unified Economic Agreement, it aims to develop, enhance and extend the economic ties between the member states and looks forward to coordinate and standardize the economic, financial and monetary policies as well as the legislations in the major production sectors (Cooperation Council for the Arab States of the Gulf 1981).

5.1.2 The Unified Economic Agreement

The agreement consists of seven chapters with 28 articles. The seven chapters deal respectively with trade exchange, movement of capitals and individuals, coordination of development, technical cooperation, transport and communications, financial and monetary cooperation and finally some closing provisions. With respect to this study several articles are of interest and will be mentioned briefly.

- **Article 1**
  The member states shall permit the importation and exportation of agricultural, animal, industrial and natural resource products that are of national origin and all these products shall receive the same treatment as national products.

- **Article 2**
  All agricultural, animal, industrial and natural resource products that are of national origin shall be exempted from reciprocal charges.

- **Article 4**
  I. Member states shall establish a uniform minimum customs tariff applicable to the products of countries other than GCC member states.
  
  II. One of the objectives of the uniform customs tariff shall be the protection of national products from foreign competition. This tariff shall be implemented within five years.
- **Article 7**
  Member states shall coordinate their commercial policies and relation with other states and regional economic grouping and blocs with a view to creating balanced trade relations and equitable circumstances and term of trade therewith. To achieve this goal, the member states shall make four arrangements of which the next two:
  I. Conclusion of collective economic agreements in cases where joint benefits to member states would be realized;
  II. Taking of action for the creation of collective negotiating power to strengthen their negotiating position vis-a-vis foreign parties in the field of importation of basic needs and exportation of major products.

- **Article 11**
  Member states shall endeavour to formulate united oil policies and adopt common positions vis-a-vis the outside world, and in international and specialized organizations.

- **Article 12**
  II. Standardize their industrial legislation and regulations and guide their local production units to meet their needs.

- **Article 22**
  Member states shall seek to coordinate their financial, monetary and banking policies and enhance cooperation between monetary agencies and central banks, including the endeavour to establish a joint currency in order to further their desired economic relations.

5.1.3 The GCC organization

The GCC structure consists of two main councils; the Supreme Council and the Ministerial Council. The first one comprises heads of member states and its chairmanship rotates periodically according to the alphabetical order of the names of the states. This Council undertakes to realise the objectives of GCC, especially in the following:
- Consideration of issues of interest to member states;
- Laying down the higher policy of the GCC and the basic guidelines thereto;
- Approval of bases for dealing with other states and international organizations.

The Ministerial Council is made up of the Foreign Ministers of the member states or the ministers who represent them. Its chairmanship rotates periodically every six months according to the alphabetical order of the names of the states. The Council holds its regular meetings once every three months and it may hold extra sessions in compliance with the invitation of any
member state and the support of another member state. It undertakes efforts to realise the objectives of the GCC, especially in the following:

- Proposal of policies and laying down the recommendations;
- Endeavour to encourage, develop and coordinate the activities existing between the member states in all fields;
- Promotion of aspects of cooperation and coordination.

After the ratification of the agreement, the headquarters of the Secretariat General were established in Riyadh and annual summits of the leaders have taken place in the different Gulf capitals.

5.1.4 Achievements

The GCC meetings, which have been held regularly in the last eight years, have resulted in many decrees and measures on several issues like industry, rights, trade, investments, education, environment, Zakat duties and other economic activities. On the other hand, and with regard to the agricultural sector, the last published report of the GCC with the title 'Decrees which have been issued and measures which have been adopted in implementing the Unified Economic Agreement', does not include much about a joint agricultural policy (Cooperation Council for the Arab States of the Gulf 1988).

For instance, and in accordance with article 1 of the Agreement, the financial and economic committee at its fifth meeting, held on the 11th of May 1983 in Riyadh, agreed on the unrestricted freedom of export in relation to agricultural products and cattle of national origin to the states of the Cooperation Council. The fact that a joint subsidy legislation in the agricultural sectors of the GCC member states is still lacking, means that such a decree might cause unfair competition among the agricultural producers; especially when one of the member states provides higher subsidies on agricultural production than the other. This issue seems indeed to be one of the sensitive subjects within the GCC. Different input and output prices on the local markets are another result of the failure in a common agricultural policy.

Yet, and although the progress made by the GCC in the last eight years can hardly be considered as substantial, in its short existence the GCC achieved a collective approach in political, trade and defence fields. This approach was able not only to consolidate the economic and political position of the Gulf states, but was also strong enough to surmount several internal tensions and to create a political stable region even during the Gulf war period.
5.2 The GCC and the EC

5.2.1 The EC/GCC Cooperation Agreement

The relations between the EC and the Arab world have been conducted for long within the framework of preferential agreements with the two regions: Mashreq (Egypt, Jordan, Lebanon and Syria) and Maghreb (Algeria, Morocco and Tunisia). Four other Arab countries (Djibouti, Mauritania, Somalia and Sudan) have a special relation with the EC through the Lomé Convention. Accordingly, the Gulf states are the only Arab countries that until recently had no special contractual relations with the EC. This situation only changed in June 1988 when a tentative cooperation agreement between the EC and the GCC was signed.

When the European Parliament discussed the EC/GCC relation in September 1981, it called for the establishment of formal links between the EC and the GCC. This step was followed by many mutual visits of delegations and later by the approval of principles for closer links made by the EC foreign policy meeting in February 1984. By July 1984 the GCC proposed exploratory discussions about a possible cooperation agreement. Indeed, an initial round of discussions took place in Bahrain November 1984, followed by a second round in March 1985 in the same country. In the latter meeting the parties agreed on the mutual aim to obtain a comprehensive beneficial agreement which should foster the broadest possible commercial and economic cooperation between both sides.

For the GCC there are some special reasons why more cooperation is so important. The Gulf is confident that the EC has already passed a long road both in internal organization and developments which the GCC wishes to imitate. Besides that, the GCC looks with mixed feelings to the integration of the EC market in 1992. The Gulf states fear that the integration will close the Community market even more for GCC products. Further they worry that the huge internal market and the growing relations with non-EC European countries will leave less room for a growing and developing relation with the GCC. For many projects and products it has already been noticed that the EC companies are less interested in the Gulf market and that they are busy preparing themselves for the integrated EC market.

The cooperation agreement between the EC and the GCC was signed in June 1988. It is a multilateral economic agreement which represents a first step along what will probably be a long transition period towards a free trade situation. The agreement provides a rough framework concerning industry, agriculture, fisheries, trade, energy, science, technology, environment, education and investments. It is mainly composed of objectives and goals of which the means how to achieve them must be further outlined.
5.2.2 Petrochemicals

Sensitive aspects have been postponed to a further agreement after examination of better market access and trade liberalisation. Until so far, the parties committed themselves to seek solutions which must (Weiss 1989): be compatible with the GATT; not endanger the main interests of the Community's petrochemical and refinery sector; protect the infant industries in the Gulf states; and, guarantee non-discrimination in the EC between oil products from the Gulf states and imports from other parts of the world.

With respect to petrochemicals the EC is the second biggest oil importer from the GCC. The EC share is 19%, compared with 28% for Japan and 15% for the US. The import of oil, the common trade policy and duties of the EC have already been a matter of discussion for a long time. In recent years the Gulf states have established downstream activities and hence were able to refine a part of the crude oil production themselves. In 1986 the capacity was 2 million barrels per day, which equals 1/7 of their total crude oil production (Weiss 1989). With this the GCC accounts for 5 to 6% of the total supply in the world market (Hart 1988).

The EC petrochemical industry is in need of restructuring and is dependent on crude oil imports. Therefore it can not be competitive with the GCC petrochemical plants and hence is protected by customs barriers. The rate of protection increases with the degree of oil processing. The GCC on the other hand is striving for a free trade agreement in order to enlarge export outlets. The GCC claims that the protection of the EC petrochemical industry is not according to the GATT and that the customs barriers on GCC products are much higher than the customs duties imposed by GCC on imports from Europe.

Although the EC is aware that free trade can lead to economic prosperity, there is internal pressure especially from the petrochemical industry that calls for protection. Apart from this, industrial policy makers argue that a certain amount of petrochemical industry should survive in order to maintain a substantial testing ground considering the fast rate of innovation of process technology and plant equipment taking place in this field (Weiss 1989). But the EC interests are not all uniform. EC exporters of industrial equipment have opposite interests. Hence they favour free trade conditions in the relationship with the GCC. In spite of the EC protectionist measures however the export of petrochemicals from the Gulf states to the Community has risen rapidly.

5.2.3 Agriculture

Article 4 of the EC/GCC agreement is devoted to agriculture, agri-industry and fisheries, and states that the contracting parties shall strive to encourage and facilitate inter alia:
- the stepping up of exchanges of information on developments in agricultural production and on short and medium term forecasts of production, consumption and trade on world markets;
- the promotion of contacts between enterprises, research institutions and other agencies in order to stimulate joint projects in agriculture, agri-industry and fisheries.

As for trade, it is stated that the main objective is the reduction of trade barriers.

It is obvious that there are no concrete results or consequences yet with regard to the agricultural trade or development which can clearly be ascribed to this cooperation agreement. Further negotiations are required to be worked out, in order to translate such an agreement into actual activities and hence results. The private sectors of both parties should play a major role in this process.
6. Agricultural trade relations between the EC and the GCC

6.1 General

6.1.1 Qualitative aspects

The trade relation between Western Europe and the Arabic world already dates back many centuries ago. On account of the oil business some decades ago the trade relation intensified. The Arabian Peninsula and its social and cultural system became better known and understood by the western people. At present a well functioning and fruitful trade relationship exists.

Nevertheless difficulties and obscurities still occur. In the Arabic world a personal approach is very much appreciated. A personal visit of an important high ranked person therefore will have much more effect than sending agents and folders. Hence a trade relation needs to be built up. Arabian people are generally not used to "fast deals". For them business is a matter of time and mutual trust. The above mentioned matters might cause some inconveniences, for the western trading manners are sometimes different: generally business has to be quick and efficient.

Usually, the trade contacts are very flexible as long as certain manners and customs are taken care of. With respect to the religious difference both Arabs and Europeans are very tolerant. The only significant influence that can be considered as restrictive is Ramadan. During Ramadan the economic activities are reduced to a minimum which can cause delays in the trade and business. In addition, the fact that the weekend in the Gulf takes place on Thursday and Friday means that no business contacts are possible from Thursday until Sunday.

Another problem is the fact that the currencies of the GCC countries are connected with the US dollar. As a result of exchange rate changes between the US dollar and the EC currencies, the prices of EC products for the GCC market are subject to strong fluctuations. In addition, the Gulf states businessmen prefer to pay in US dollar which is seldom accepted by the EC companies in case of long term sales and contracts. Fluctuations of the exchange rate between the confirmation and the actual purchase time can make a big difference in price.

Sometimes communication in terms of language is a problem for the EC and the GCC. In the Gulf, the English language is considered as the trading language pre-eminently.
6.1.2 Quantitative aspects

In general terms, the EC is the largest trading partner and the biggest developed region within a short range of the Gulf. On the other hand the GCC was the third important export market in the period 1975-1985. In this period the Gulf states started to occupy a key place in the world economy. The general trade figures between the EC and the GCC are shown in table 6.1.

The fall in EC-imports from the GCC, mainly caused by the fall in oil prices, resulted in an EC trade-surplus in 1983 and 1984. The Community's principal exports to the Gulf states are machinery and manufactures (including technological agricultural products such as glass-houses, irrigation systems etc.). The Community's share of the Gulf imports was 33.4% in 1983, compared with 19.6% for Japan and 15.8% for the USA. In 1984 the Community exports to the GCC accounted for 6.4% of its total exports. The share of EC agricultural products in the Gulf import markets was 20% in this year, making the EC the main supplier of foodstuffs. In 1983 the Community's share of Gulf exports was 18.8% compared with 28.6% for Japan and 5% for the USA.

Table 6.1 Imports, exports and trade balance between the EC and the GCC, 1977-1984, billion US dollars

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>EC exports to GCC</td>
<td>18.2</td>
<td>6.8</td>
<td>8.5</td>
<td>13.4</td>
<td>17.1</td>
<td>18.0</td>
</tr>
<tr>
<td>EC imports from GCC</td>
<td>13.7</td>
<td>15.6</td>
<td>18.4</td>
<td>38.0</td>
<td>27.1</td>
<td>17.2</td>
</tr>
<tr>
<td>Trade balance</td>
<td>+4.5</td>
<td>-8.8</td>
<td>-9.9</td>
<td>-24.7</td>
<td>-9.9</td>
<td>+0.8</td>
</tr>
</tbody>
</table>


6.2 Agricultural trade

6.2.1 Balance

Agricultural trade between the GCC and the EC is rather unilateral; the EC is the exporting and the GCC the importing unit. This can easily be explained by the fact that the GCC is composed of rather wealthy but at the same time quite arid countries with limited production possibilities in the agricultural sector. They have started to develop their agricultural production but self-sufficiency rates are still very low, and the local production finds an outlet on the internal market.

On the other hand, the EC has a well developed agricultural sector for which the export of products is a vital outlet. Not only surpluses are exported but also products which are especially produced for the external market. In 1987 the total value
of the EC agricultural export was 32.8 billion US dollar (= 28.4 billion ECU), of which the GCC countries took a share 6.1% (Eurostat-exmis). Table 6.2 gives figures on the agricultural trade between the GCC and the EC. It should be noted that the higher figures for 1986 and 1987 are caused by the entry of Spain and Portugal in the Community.

Table 6.2 EC agricultural exports to GCC and GCC agricultural exports to EC, 1981 - 1987, mln US dollars

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>EC agr. exports to GCC</td>
<td>1,796</td>
<td>1,759</td>
<td>1,781</td>
<td>2,141</td>
<td>1,680</td>
<td>1,969</td>
<td>1,994</td>
</tr>
<tr>
<td>EC agr. imports from GCC</td>
<td>7</td>
<td>17</td>
<td>14</td>
<td>15</td>
<td>17</td>
<td>30</td>
<td>66</td>
</tr>
<tr>
<td>Agric. trade balance</td>
<td>1,789</td>
<td>1,742</td>
<td>1,777</td>
<td>2,126</td>
<td>1,663</td>
<td>1,939</td>
<td>1,928</td>
</tr>
</tbody>
</table>

*) EC-12; other figures EC-10.
Source: Eurostat-exmis.

6.2.2 EC imports from GCC

Agriculture only contributes a tiny part to the total GCC exports: for all GCC countries less than 1% of total exports in 1987. Accordingly, the value of the GCC agricultural exports to the EC is very modest, although it has increased recently. The agricultural export of the Gulf states is mainly directed to Egypt, Iraq, Jordan and the Far East. Table 6.3 shows the main products and the total agricultural export value of the GCC to the EC.

No clear pattern emerges from the table. In one year the import value of a product can be several mln US dollar, whereas it can be close to zero in the next year. It is also difficult to identify some major product groups, untanned hides and skins being the exception. In 1987 the GCC export of grain and grain products also had a considerable value: 24.9 million US dollar grain was imported by the EC. This is all on the account of Saudi Arabia. The Saudian grain (wheat) was imported by Belgium, Italy and the United Kingdom.

In the Gulf states the vegetable production is very successful and during the winter exportable surplusses often occur. However, the EC market is of no importance for these exports; firstly because the Community generally produces sufficient to meet the domestic demand and secondly because the Gulf states do not have a stable and well organized export marketing and transport system.
6.2.3 EC exports to GCC

The GCC member states have a simple and clear import tariff system. Agricultural commodities used to enter the GCC with imposed duties between 0 and 7%. However, custom duties on agricultural imports have gone up for many products recently, whilst for some other products even a 25% customs duty has been agreed upon. Reasons for the increase of these tariffs are to protect the domestic agricultural sector and, more importantly, to raise public revenue which has diminished since the fall of the oil prices. Agricultural trade is thus likely to become more or less involved in protectionist measures. However, it is not likely that the customs duties will have large volume effects on the agricultural trade.

Table 6.4 shows the recent development in the composition of the export values. For comparison, figures about US agricultural exports to the Gulf are given in table 6.5. Over the last years total agricultural exports of both the EC and the US to the GCC have been fairly constant, while total agricultural imports by the GCC countries have declined as a result of their increasing production. So, the EC and the US increasingly dominate agricultural exports to the Gulf states. Together they cover about 40-50% of the total agricultural imports by the Gulf countries (UN Statistical paper, various issues). With regard to dairy products and grains they took account of 60-70% of the total imports.
Table 6.4 EC agricultural exports to the GCC, 1981-1987 (mln US dollars)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total agr. products</td>
<td>1796.3</td>
<td>1759.3</td>
<td>1780.6</td>
<td>2140.7</td>
<td>1680.2</td>
<td>1969.4</td>
<td>1993.6</td>
</tr>
<tr>
<td>Live animals</td>
<td>13.7</td>
<td>13.2</td>
<td>30.3</td>
<td>38.5</td>
<td>32.3</td>
<td>25.9</td>
<td>40.2</td>
</tr>
<tr>
<td>Meat/-prod.</td>
<td>269.4</td>
<td>219.2</td>
<td>247.3</td>
<td>264.6</td>
<td>238.8</td>
<td>244.5</td>
<td>269.8</td>
</tr>
<tr>
<td>Dairy/eggs</td>
<td>302.1</td>
<td>363.2</td>
<td>368.6</td>
<td>379.1</td>
<td>335.0</td>
<td>407.3</td>
<td>429.2</td>
</tr>
<tr>
<td>Fish/-prod.</td>
<td>9.5</td>
<td>11.3</td>
<td>12.1</td>
<td>12.5</td>
<td>11.3</td>
<td>10.1</td>
<td>9.7</td>
</tr>
<tr>
<td>Grain/-prod.</td>
<td>447.8</td>
<td>380.7</td>
<td>259.7</td>
<td>577.3</td>
<td>284.6</td>
<td>429.3</td>
<td>297.5</td>
</tr>
<tr>
<td>Vegetables &amp; fruits</td>
<td>101.2</td>
<td>113.2</td>
<td>132.2</td>
<td>120.5</td>
<td>127.1</td>
<td>158.2</td>
<td>151.4</td>
</tr>
<tr>
<td>Sugar/-prod.</td>
<td>214.7</td>
<td>146.4</td>
<td>114.8</td>
<td>147.7</td>
<td>102.2</td>
<td>107.9</td>
<td>184.3</td>
</tr>
<tr>
<td>Coffee/tea/cac/spices</td>
<td>86.7</td>
<td>92.5</td>
<td>97.2</td>
<td>105.4</td>
<td>104.2</td>
<td>117.8</td>
<td>129.1</td>
</tr>
<tr>
<td>Animal feed</td>
<td>24.2</td>
<td>38.1</td>
<td>67.7</td>
<td>68.4</td>
<td>49.0</td>
<td>47.4</td>
<td>38.8</td>
</tr>
<tr>
<td>Processed food</td>
<td>74.8</td>
<td>91.8</td>
<td>94.9</td>
<td>91.5</td>
<td>95.5</td>
<td>108.7</td>
<td>119.2</td>
</tr>
<tr>
<td>Drinks</td>
<td>73.4</td>
<td>63.9</td>
<td>75.1</td>
<td>86.4</td>
<td>65.4</td>
<td>72.7</td>
<td>77.0</td>
</tr>
<tr>
<td>Tobac/-prod.</td>
<td>126.2</td>
<td>168.9</td>
<td>214.1</td>
<td>178.8</td>
<td>166.3</td>
<td>169.5</td>
<td>173.8</td>
</tr>
<tr>
<td>Other</td>
<td>52.6</td>
<td>56.9</td>
<td>66.6</td>
<td>70.0</td>
<td>68.5</td>
<td>70.1</td>
<td>73.6</td>
</tr>
</tbody>
</table>

Source: Eurostat-exmis.
* EC-12; other figures EC-10.

of these products by the Gulf states in 1986 and 1987. No significant changes occurred in the distribution of the imports from the EC and the US: the export value of the EC has been 2-2.5 times the export value of the US. The GCC agricultural imports are dominated by Saudi Arabia, taking account of some 70% of the trade with the EC and the US (Foreign Trade Statistics, Riyadh, various issues).

Table 6.5 US agricultural exports to the GCC, 1981-1987, mln US dollars

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total agr. products</td>
<td>866.9</td>
<td>782.1</td>
<td>810.7</td>
<td>805.9</td>
<td>713.1</td>
<td>685.5</td>
<td>795.4</td>
</tr>
<tr>
<td>Live animals</td>
<td>2.3</td>
<td>3.2</td>
<td>2.7</td>
<td>4.1</td>
<td>2.8</td>
<td>3.0</td>
<td>1.8</td>
</tr>
<tr>
<td>Meat/-prod.</td>
<td>52.9</td>
<td>41.5</td>
<td>41.1</td>
<td>33.3</td>
<td>26.6</td>
<td>18.7</td>
<td>17.4</td>
</tr>
<tr>
<td>Dairy &amp; eggs</td>
<td>18.0</td>
<td>10.9</td>
<td>2.9</td>
<td>2.9</td>
<td>1.2</td>
<td>0.9</td>
<td>1.0</td>
</tr>
<tr>
<td>Fish/-prod.</td>
<td>3.8</td>
<td>5.7</td>
<td>2.9</td>
<td>2.2</td>
<td>1.7</td>
<td>0.6</td>
<td>1.5</td>
</tr>
<tr>
<td>Grain/-prod.</td>
<td>304.1</td>
<td>287.7</td>
<td>298.4</td>
<td>304.4</td>
<td>201.4</td>
<td>241.0</td>
<td>363.9</td>
</tr>
<tr>
<td>Fruit &amp; veget.</td>
<td>84.6</td>
<td>88.5</td>
<td>91.9</td>
<td>81.3</td>
<td>74.4</td>
<td>57.4</td>
<td>48.8</td>
</tr>
<tr>
<td>Tobac/-prod.</td>
<td>226.2</td>
<td>155.0</td>
<td>201.0</td>
<td>196.2</td>
<td>250.7</td>
<td>212.8</td>
<td>220.0</td>
</tr>
</tbody>
</table>

UN statistical paper, various issues.
Live animals and meat

For the six GCC countries as a whole the animals and meat sector shows a stable import value since 1981, with a gradual increase for living animals. Looked at it per country however, there are some striking matters. The export to Saudi Arabia of both living animals and meat rose till 1984 after which a decline commenced. This decline can be ascribed to the strong development of the broiler farms in Saudi Arabia.

Further, more and more sheep and mutton are produced in Saudi Arabia or imported from other surrounding countries. In Kuwait also a decreasing tendency occurs for both live animals and meat since 1984. Kuwait and other Gulf states have started to import sheep from Australia and New Zealand in order to fatten, slaughter and process them locally.

The enhanced EC export of live animals to the Gulf states is caused by the United Arab Emirates. The export to the United Arab Emirates manifolded in 1987. This is probably due to the development of the heavy stimulated dairy, chicken and red meat sector.

The explanation of the stabilized gross export to the Gulf might mainly be found in the changes in the EC agricultural policy with respect to restitutions and subsidies and its relation with the decrease in stored quantities. The falling dollar rate in 1986 and 1987 in comparison with the most important Community currencies can be seen as an extra factor which resulted in an increase in some export prices.

Dairy products and eggs

The EC export value in dollars to the GCC has steadily been rising during recent years (see table 6.4). Expressed in ECU however, the value diminished by 22.6% between 1984 and 1987. The restrictive EC policy with regard to export restitutions and subsidies combined with the low US dollar rate since 1986 increased the price of dairy products and eggs considerably. The diminished exported values thus indicate a diminished exported quantity. The general decrease in exported quantities of dairy products and eggs to the GCC is not solely a consequence of the increased prices. The rapidly expanding eggs and milk production in the Gulf states may even be a more important cause. Especially in Saudi Arabia where milk production takes care of a significant part of the domestic demand. In the eggs sector the Gulf local production increased rapidly and it is to be expected that most of the GCC countries will be selfsufficient by 1990.

Grain and grain products

A declining tendency in exported value of grain and grain products occurs. Expressed in ECU the export value decreased 64.7% between 1984 and 1987. The total import of grains by Saudi Arabia fluctuates strongly, as do the market shares of the EC and the US. Wheat has been imported from the US, but in small quan-
Barley has been imported in large quantities, but while first the EC was the main supplier, since 1986 the US has taken over the lead in this sector.

The US takeover was done under the Export Enhancement Program (EEP), launched in 1985 to make US agricultural exports more competitive in foreign markets where they lost out to subsidized exports from other countries, primarily those of the EC (Silvis e.a. 1989). Saudi Arabia was among the eligible markets in 1987, and took more than 3.5 mln tons of barley with an estimated total bonus of 136.3 mln US dollar (World Perspectives 1987).

- Fruit and vegetables

For fruits and vegetables an increasing and declining tendency is shown in table 6.4 until 1986. In 1986 and 1987 the export increased again as a result of the entry in the Community of Spain and Portugal. In these countries relatively cheap produced fruits and vegetables stimulated the EC export which had become less competitive as a result of the low US dollar rate. The development of the local production in the Gulf states again plays a role as well. In all six GCC countries heavy incentives have been applied to stimulate the vegetable and fruit production. As vegetables are mainly grown in glass-houses, the production conditions are controllable to a large extent. Thus the success of the vegetable production is more dependent on the amount of money invested in production technology and knowledge than on the changing and unfavourable weather conditions. Hence, the production of vegetables has increased rapidly over the last few years. During the winter, which is the growing season in the Gulf states, even surpluses occur of various products such as cucumbers and tomatoes.

In fruit production the situation is less bright and the major part of the domestic demand still has to be imported. However the EC is but a minor supplier of fruit to the Gulf states. Most fruit is imported from other Arabic countries, south and south east Asia.

6.3 Effects of the Common Agricultural Policy

As was mentioned earlier, the exports of the Gulf states are very uniform: they consist of crude oil and oil products for 95%. On average the agricultural export of the Gulf states contributes less than 0.5% to their total export. Thus the effects of EC's common agricultural policy for the GCC do not lie in the field of competition on third country markets.

The EC system of export restitutions and subsidies, combined with the low customs duties imposed by the GCC countries, have resulted in a large supply of cheap agricultural products on the GCC market. The Community became the most important supplier of many agricultural products, both fresh and processed. The cheap
food supply can partly be considered as a benefit for the GCC of the common agricultural policy.

The GCC countries however endeavour to develop their agricultural sector. Agricultural production was stimulated with heavy input subsidies and soft bank loans, and considerable attention was paid to the food processing industry. In order to compete with import products (a.o. from the EC) also price subsidies were established.

In recent years the EC agricultural exports to the Gulf states have come under pressure. Several factors are involved. Firstly the reform of the common agricultural policy (for example: the super levy on milk) has led to a more restricted restitutions and subsidies policy. As a result EC's agricultural products have gone up in price significantly. This effect was strengthened by the falling dollar rate. Perhaps even more important is the fact that the growth of the GCC market has ended; partly through the success of its agricultural development.

The Gulf states have for many years benefitted from the price depressing effect of the EC's common agricultural policy. On the other hand, the protective levies, customs duties and import restrictions imposed by the EC do not seem to have affected the GCC agricultural sector significantly. The GCC agricultural sector was stimulated independently for domestic reasons and the surplusses that now and then occur are disposable in the surrounding countries.

It can be concluded that the agricultural trade between the EC and the GCC is functioning rather well. The EC common agricultural policy has influenced this trade positively for many years. However, as a result of the reform this trade might be less attractive in the coming years. For many agricultural products the trade is negatively affected by the unstable position of the US dollar. The increased customs duties for agricultural imports imposed by the GCC might exert some influence on the trade figures, although the agricultural growth in the Gulf states will be a more decisive factor.
7. Outlook

- **Agricultural growth**
  Looking back at all that has been done in the agricultural sector within the Gulf, one should admit that the achievements exceed all expectations. Both the growth rate and production volume were nonpareil. Some Gulf states, like Saudi Arabia, even reached self-sufficiency for several agricultural products. The rapid growth in the Saudi Arabian agriculture is one of the vigours which strengthens the agricultural position of the country and hence consolidates its influence among the GCC member states. However, agricultural production is only possible in a limited area where fossil water is available.

- **Water**
  The water issue seems to be a point of difference in the agricultural policies of the different Gulf states. Saudi Arabia follows a firm strategy directed at agricultural growth, while Kuwait is more careful with regard to the scarce water resources in the country. This basic policy difference which is attended by different subsidy legislations leads to many other distinctions when it comes to customs duties. The input and output prices of the agricultural sector in the Gulf states frequently demonstrate differences between the six countries. Considering the agricultural chances of the region in the future, perspectives lie in those fields were less water per product unit is required. This is partly the explanation of the great success in the intensive livestock sector. Sophisticated recycling irrigation systems in the fields and greenhouses can offer new possibilities for the Gulf.

- **Economic situation**
  On the economic front, the squeeze caused by the fall of the prices and production of oil after 1982 still has considerable influence on the Gulf funds. The great expenditures for infrastructural development and the financial support to Iraq during the Gulf war caused also a distinct stagnation in economic growth of the region. The decline in the US dollar value in the last few years inflicted another shock to the Gulf economy. Nevertheless, many economy and oil experts foresee a slight and gradual increase in the oil price in the near future. In addition, the major part of the infrastructural works in the region has been completed and a significant enhancement of the economic activities in the Gulf is generally expected.
- Political situation

On the political front, with the establishment of the GCC the Gulf states have built up a well settled and stable system in a rather short period. They also managed to stabilize many tensions and conflicts both internally and in the surrounding region and, not less important, they achieved fruitful relations with many other countries and organizations, an example of which is the cooperation agreement with the EC. This agreement demonstrates the economic interdependence between the EC and the GCC as well as the willingness of both parties to work together in an effort to further their common interests. In the years to come the petrochemical issue will probably remain most sensitive, for the fact that not only economic factors are involved but also emotional and political factors.

- Agricultural trade between EC and GCC

Notwithstanding their agricultural achievements, the Gulf countries will remain a challenging market for European agriculture. In the future the Gulf states will still need to import animal feedstuffs and food to meet their domestic demand. For a number of years an intensive relationship with the EC has developed. This was not the consequence of official trade and cooperation agreements between the EC and the GCC as blocs. The EC as a bloc never had a special agricultural trade policy towards the GCC. The traditionally good trade relations between the member states result, among others, from the relative short distance between the EC and the Gulf states, competitive product prices and good quality.

- Finally

It should be noted that the Gulf countries are among the food importing countries that have for many years benefitted heavily from the surplus disposal programs of the EC, and of the related competition on world food markets between the EC and the US. As the negotiations on world agricultural trade in the Uruguay Round of the GATT have now entered its fourth and final year, it is a reasonable guess that in case of a EC/US compromise, the Gulf states are going to pay more for their agricultural imports.
References

Aal Khalifah, A.A.E.
Strategy for Food Selfsufficiency in the Kingdom of Saudi Arabia
Riyadh, King Saud University Press, 1982; College of Agriculture
Research Centre No 12

Aal Khalifah, A.A.E.
Production Function for Saudi Agriculture Industry
Riyadh, King Saud University Press, 1982; College of Agriculture
Research Centre No 17

Almohamdes Alzirai Magazine
'Kuwaitian agricultural sector achieved a growth of 18 per cent'
Almohamdes Alzirai Magazine, June 1989, No 13

Al-Sahlawi, M.
'G.C.C. Demand Outlook to 2000'
Energy Economics, 10(1988)1, pp. 42-47

Beaumont, P. & K. Mc Lachlan
Agricultural Development in the Middle East
Chichester, John Wiley & Sons, 1985

Bodart, P.
'Verenigde Arabische Emiraten, afzetkansen in de sector agro-
industrie van een "groen" woestijn gebied'
Berichten over de buitenlandse handel (1987)13 pp. 10-13

Bowen-Jones, H. & R. Dutton
Agriculture in the Arabian Peninsula
London, The Economist Intelligence Unit, 1983

Brouwer, P.B.J.M.
Saoedi Arabië
Netherlands Embassy, 1989

Burtin, J.
Het gemeenschappelijk landbouwbeleid en zijn hervorming
Luxemburg, 1987, Europese documentatie

Butler, N.
The international grain trade: problems and prospects
London, Croom Helm, 1986
REFERENCES (continued)

Coeck, M.
'Olie en economische ontwikkeling in de Arabische Golfstaten'
Internationale Spectator, 43(1989)1, pp. 61-69

Commissie van de Europese Gemeenschappen
'Landen van de Golf en het Arabisch schiereiland'
Bulletin van de Europese Gemeenschappen (1988)6, pp. 103-104

Commissie van de Europese Gemeenschappen
De toestand van de landbouw in de gemeenschap, verslag 1988
Brussel-Luxemburg, 1989

Commission of the European Communities
The European Community and the Gulf Cooperation Council
Bruxelles, Europe information, External relations, October 1985

Cooperation Council for the Arab States of the Gulf
Decrees which have been issued and measures which have been
adopted in implementing the unified economic agreement
Riyadh, 1988

Cooperation Council for the Arab States of the Gulf
The unified economic agreement
Riyadh, 1981

Gamue, M.N.
'The Status of Rural Development in Saudi Arabia'
Riyadh, King Saud University Press, 1982; College of Agriculture
Research Centre No 9

Hart, S.
'The long slow haul to a petrochemicals deal'
The Middle East (1988)163, pp. 29-30

Hilgeman, H.
Bahrein; Koeweit; Qatar; United Arab Emirates
Netherlands Embassy, 1988

Hooydonk, M.C. van
'De Golfstaten en hun voedselvoorziening'
Den Haag, 1986, Ministerie van Economische Zaken EVD;
Literatuurrapport No 28

Hulabosch, F.N.M.
Verenigde Arabische Emiraten
Den Haag, Staatsuitgeverij 1980

59
REFERENCES (continued)

Humayun, S.  
'Five years of steady progress'  
Pakistan & Gulf Economist, 28 June 1986, pp. 30-33

Humayun, S.  
'G.C.C. economies under pressure'  
Pakistan & Gulf Economist, 2 August 1986, pp. 29-32

Islam, S.  
'Exploring the E.C.C. dimension'  
Middle East business weekly, 33(1989)21, pp. 4-5

Jamal, F.  
'Food strategy for Gulf countries'  
Pakistan & Gulf Economist, 27 July 1985, pp. 32-33

King Saud University  
Journal of the College of Agriculture, Vol 5  
Riyadh, 1983

King Saud University  
Journal of the College of Agriculture, Vol 9  
Riyadh, 1987

Kuwait Ministry of Agriculture and Fisheries  
Agriculture and fisheries statistics  
Kuwait, 1987

Lancaster, P.  
'The desert blooms in Qatar'  

Laurens, H.  
'De landbouw in de Verenigde Arabische Emiraten: mythe of werkelijkheid?'  
Den Haag, 1984; Berichten over de buitenlandse handel, No 16, pp. 20-22

The Middle East  
'The Gulf wakes up to reality'  
The Middle East (1989)174, pp. 5-9

Office for publications of the European Communities,  
'Legislation'  
REFERENCES (continued)

Patricios, N.N.
International Handbook of Land Use Planning
New York, Greenwood press, 1986

Peppelenbosch, P.G.N. en W.M.E. Teune-Kasbergen
Saoedi Arabie
Zutphen, 1983, Koninklijk instituut voor de tropen

Rooyackers, F.
'VAE, invoerbepalingen'
Export magazine. 24 december 1988, pp. 45-48

Saied Babkyi, A.M. et al.
'Analytical study for the market of white meat and eggs'
Researches of the Jeddah chamber of commerce and industry, 1985, No 3

Saudi Arabian Statistical Office
Foreign Trade Statistics
Riyadh, various issues

Silvis, H.J., C.M.N. van der Jagd en E.J. Sonneveld
Internationale aspecten van het EG-landbouwbeleid; de relatie met de VS
Den Haag, LEI 1989, Onderzoekverslag 50

Ueberreuter, C.
'UAE builds up its non-oil industries'
OPEC bulletin, 1987, pp. 21-25

United Nations
Statistical papers
New York, various issues

USDA
'Food import demand of eight OPEC countries'
Washington DC, 1983; Foreign Agricultural Economic Report No 182

USDA
'Middle East and north Africa'

Weiss, D.
Perspectives of cooperation between the European Community and the Gulf Cooperation Council member countries
Berlin, Free University 1989
REFERENCES (continued)

Willemse, H.
'Economie Saoedi Arabië weinig florissant'
Exportmagazine (1989)6, pp. 35-37

World Perspectives
U.S. Agricultural Policy Guide
Washington DC, 1987; World Perspectives

Zuidervliet, A.C.
Koeweit
Amsterdam, Koninklijk Instituut voor de Tropen, 1976

Zuidervliet, A.C.
Oman
Zutphen, Koninklijk Instituut voor de Tropen, 1984