## The Uruguay Round and international trade in agricultural products. Implications for arab countries

**Goldin I., Kherallah M.**

*in*

**Papadopoulou Z. (comp.), Cauwet L. (comp.), Papadopoulou Z. (collab.), Cauwet L. (collab.).**
**The GATT and Mediterranean agricultural trade**

**Chania : CIHEAM**
**Options Méditerranéennes : Série A. Séminaires Méditerranéens; n. 30**

**1997**
pages 151-173

# THE URUGUAY ROUND AND INTERNATIONAL TRADE IN AGRICULTURAL PRODUCTS.
## IMPLICATIONS FOR ARAB COUNTRIES*

Ian GOLDIN*
Mylène KHERALLAH*
World Bank, Washington

For the first time, the GATT has addressed agricultural trade policies in a comprehensive manner. Although only eight Arab countries are currently members of the GATT[1], the Uruguay Round agreement will have important repercussions for the whole region. The agreement will affect world prices and the direction and volume of world trade. The impact on Arab countries will depend on their export and import structures, their trade links, and the composition of their economic activities.

The agricultural sector of Arab countries constitutes, on average, around 19.5 percent of their GDP, ranging from 1.7 percent for the United Arab Emirates to 65 percent for Somalia (Table 1). Although the agricultural and economic systems of these countries vary widely, the Arab countries all face a limited agricultural resource base and, with the exception of Morocco, have to rely on imports to meet over half of their food requirements. Because of the Arab countries' large dependence on agricultural trade, the Uruguay Round of the GATT will have particularly important price and welfare consequences for these economies.

This chapter begins with a discussion of the agricultural trade provisions of the Uruguay Round agreement. After the likely consequences for world trade and agricultural commodity prices are examined, the implications for Arab agriculture are assessed by reviewing the specific economic and trading arrangements of selected Arab countries. In conclusion, the agricultural analysis is placed in a wider context, through recommendations for policy reforms in Arab countries that will serve to enhance the effects of the Uruguay Round agreement.

## THE URUGUAY ROUND AND AGRICULTURE

The agricultural provisions of the Uruguay Round will lead to major policy changes in market access, domestic support policies, export subsidies, and phytosanitary trade barriers. The implementation period, starting in July 1995, will be phased in over six years for the industrial countries and over ten years for the

---

[1] For the purpose of this paper, the Arab countries include 9 North African countries (Algeria, Morocco, Tunisia, Mauritania, Libya, Egypt, Sudan, Somalia and Djibouti) and 11 Middle Eastern countries (Jordan, Lebanon, the Syrian Arab Republic, Iraq, Saudi Arabia, Bahrain, Kuwait, Oman, Qatar, the United Arab Emirates, and Yemen). The Arab countries that are GATT members, and their dates of accession, are Bahrain (1993), Egypt (1970), Kuwait (1963), Mauritania (1963), Morocco (1987), Qatar (1994), Tunisia (1990), and the United Arab Emirates (1994). More countries are considering joigning the World Trade Organization (WTO) in 1995.

*152*

developing countries. The base period for calculating reductions in tariffs and domestic support measures is 1986-88. For export subsidies, the base period is set at 1986-90[2].

## THE TARGET

Since the 1970s, the agricultural sector of most industrial countries has been protected through government support programs and import barriers. This has resulted in a severe misallocation of resources, inefficiencies, and distortions in agricultural trade and world prices. In 1993 total transfers to the agricultural sector from consumers and taxpayers in the OECD countries amounted to about $335[3] billion. As a result of protectionist policies, OECD consumers paid, on average, 34 percent more for agricultural products than they would have paid in a free-trade environment, implying a direct cost to consumers of $125 billion. Direct subsidies from governments to agricultural producers amounted, on average, to 42 percent of producer prices -at a total cost to taxpayers of $163 billion. The highest levels of transfers are found in Japan (where the cost to consumers averages $569 a year), followed by the European Free Trade Association (EFTA) ($540 per capita), the European Union ($385), and the United States ($339). Table 2 shows the levels of direct subsidies for the main OECD countries. In the European Union, suport for domestic productions has been maintained through variable levies on imports, guaranteed producer prices, and export subsidies  In the United States, sugar and dairy products have been supported through administered prices and import quotas, whereas beef was protected through voluntary export restraints (VERs). In Japan, tariffs and quotas support domestic prices at levels that are well above world prices for rice, sugar, wheat, barley, and dairy products.

## TARIFFICATION

Under the market access provision of the Uruguay Round, the most important change is the tariffication of all nontariff barriers into bound tariffs and the reduction of these tariffs by 36 percent on a simple unweighted average basis (24 percent for developing countries), with a minimum tariff cut of 15 percent for each products (10 percent for developing countries). The least developed countries[4] are exempt from reduction commitments but have to bind their tariffs. The tariff binding of all agricultural products will result in a more transparent, predictable, and stable environment for world trade. Minimum access opportunities are also introduced, as well as temporary mechanisms to safeguard against sudden jumps in import prices or quantites.

## REDUCTION IN LEVEL OF SUBSIDIES TO AGRICULTURAL PRODUCTION

Under the Uruguay Round agreement, internal measures of support are quantified using an Aggregate Measure of Support. This measure includes market price supports, direct payments to producers, and input subsidies. The Aggregate Measure of Support quantifies the costs to taxpayers and consumers of trade-distorting policies. The Uruguay Round commits countries to capping the Aggregate Measure of Support to the 1986-88 base period and to subsequent reductions of 20 percent beginning in 1995 (13 percent for developing countries).

Expenditures on domestic support for agricultural producers in the base period were estimated at $150 billion in industrial economies, $4 billion in transition economies, and $19 billion in developing economies. To the extent that the effect of the tariff reductions envisaged in the Uruguay Round agreement are not associated with reductions in overall levels of government support to agriculture, the provisions that impose a decline in subsidies (as measured by the Aggregate Measure of Support) will lead to further reforms that should enhance market access. Nevertheless, because the concessions on domestic support policies were less specific than those on tariffs (and excluded U.S. deficiency payments, European Union compensation payments, and similar support measures), they are not anticipated to act as a binding constraint on Uruguay Round signatories.

## REDUCTION IN LEVEL OF SUBSIDIES TO AGRICULTURAL EXPORTS

The export subsidy provision of the Uruguay Round specifies a 21 percent reduction in the volume of subsidized exports and a 36 percent contraction in the associated budgetary transfers (14 percent and 24 percent, respectively, for developing countries). In addition, no new products can be subsidized if they were not included under the list of subsidzed exports in the base period (1986-90).

---

[2] Under certain conditions where export subsidies have increased, the base year is set at the 1991-92 average.

[3] The calculations are based on OECD Consumer Subsidy Equivalent (CSE) and Producer Subsidy Equivalent (PSE) measures and are presented in OECD (1994).

[4] The least developed countries are developing countries with GNP per capita below or equal to $675.

Export subsidies have been used extensively by the European Union and the United States to support domestic producers and to get rid of the resulting excess supply of agricultural products. The GATT Integrated Database estimates that the base period value of export subsidies in industrial countries was $21 billion (roughly a fifth of the value of total agricultural exports from industrial countries to countries covered by the GATT database). During the base period, industrial economies subsidized 48.2 million tons of wheat, 19.5 million tons of coarse grain, 1.8 million tons of sugar, 1.2 million tons of beef, and 1.2 million tons of cheese and butter. In 1986-90, the European Union subsidized more than 95 percent of its exports of wheat and butter, more than 90 percent of its cheese exports, 40 percent of its sugar exports, and more than 30 percent of its milk powder exports. Similarly, the volume share of U.S. subsidized exports was largest in butter (94 percent), wheat (55 percent), nonfat dry milk (40 percent), and cheese (23 percent) (see Ingco, 1994 ; and Hathaway and Ingco, 1995).

Many Arab countries benefit from U.S food aid, export credit programs, subsidized commodity specific export programs, and the Export Enhancement Program (EEP)[5]. They also receive food aid and subsidized exports from the European Union under the Common Agricultural Policy (CAP). Export subsidies have provided a cheap source of agricultural imports for many Arab countries, especially for Algeria, Egypt, and Morocco, and have increased the share and volume of European Union and U.S. agricultural exports in world markets. Combined with the internal measures of support, these policies have greatly increased the supply and export of agricultural products and have depressed world food prices. The industrial countries' commitment to reduce the volume of subsidized exports (over the six year period) covers 17 million tons of grains; 32 million tons of animals and their products; 37 million tons of dairy products; 12 million tons of oilseeds, fats, and oils; 15 million tons of fruit and vegetables; and 23 million tons of coffee, tea, cocoa, and sugar. As a percentage of 1992 world trade, the relative size of final export subsidy commitments by the five largest country users will be 41 percent for wheat, 3 percent for rice, 35 percent for meats, 22 percent for coarse grains, and 45 percent for vegetable oils[6].

### CHANGES IN PROTECTION RATES AND WORLD PRICES

The Uruguay Round will not lead to a liberalization of all commodities in all countries. A study of the pre - and post - Uruguay Round « tariff equivalent » border protection rates, based on the tariffication and export subsidy concessions for major commodities in 63 participating countries, highlights the extent and degree to which trade liberalization will be uneven across commodities and countries (see Ingco, 1994). Most countries have met the 36 percent average unweighted reduction in tariff rates by reducing the tariffs on highly protected commodities less (that is, by the 15 percent minimum reduction or 10 percent for developing countries) than the tariffs on relatively insignificant commodities (which were reduced the most). Commodities that benefited from government support programs before the Uruguay Round will still be subject to high protection rates. In addition, many countries have set their base period tariff equivalent rates at such high levels (either through « dirty tariffication » or very high ceiling binding rates) that, even after the end of the implementation period of the Uruguay Round agreement, some commodities will end up with higher protection rates than before the Uruguay Round[7]. The Uruguay Round agreement, however, does not prohibit the use of multiple or overvalued exchange rates. in some countries (the Syrian Arab Republic and Yemen) overvalued rates are used to import staple commodities, and this acts as a disincentive to domestic production. The extent to which the Uruguay Round will provide new export opportunities cannot be judged a priori. For each country, the impact of the round depends on the unique combination of the specificity of domestic economic factors and the dynamic combination of external and internal reforms. Although for individual countries, the small country assumption in general means that world prices and markets are generally given, the reforms associated with the Uruguay Round will lead to changes in world prices and markets and in the competitive advantages of all countries. The extent to which countries are able to seize the opportunities offered by the Uruguay Round depends both on their own potential ro

---

[5] The current major recipients of the EEP program for wheat are Algeria, Egypt, and Morocco. Around 67 percent of U.S. wheat exports to the region are covered under the EEP. The primary commodity under the program is wheat, but many other commodities are also covered -such as wheat flour, barley, dairy cattle, table eggs, frozen poultry, vegetable oils, rice, and semolina.

[6] See Hathaway and Ingco (1995). This will result in a final export subsidy commitment of 39.6 million tons of wheat, 19.7 million tons of coarse grains, about 2 million tons of meat, and less than 1 million tons of rice or vegetable oil.

[7] Ingco (1994) shows that in the European Union, for example, sugar, milk, rice, pork, and wheat will have higher border protection rates at the end of the implementation period than in 1989-93. The same holds for rice, sugar, milk, and dairy products in the United States. Japan, in contrast, has committed itself to substantial reduction in agricultural protection rates. Milk, sugar, and wheat, however, will continue to benefit from high tariffs. In the Maghreb countries, higher protection rates will occur for wheat, coarse grains, oilseeds, and milk. In the Mediterranean countries, binding ceiling rates will be higher for many commodities. In general, however, protection rates for cotton and fruit and vegetables should decline in the main export markets of Arab countries.

respond to new oppportunities in a flexible manner and on the actions of others (notably, customers and competitors).

The Uruguay Round agreement heralds a change in the rules governing trade that has ramifications for world production, consumption, trade flows, and prices. In the European Union, the CAP will comply with the Uruguay Round agreement[8], and the United States is committed to reduce the volume and budgetary expenses on export subsidies under the EEP and other programs. These factors, at the very least, will serve to reduce the volume of subsidized exports of agricultural products from the European Union and the United States. The policy reforms associated with the Uruguay Round agreement are also anticipated to reduce production and exports of the other commodities that are highly protected in the OECD. Lower levels of exports and, where applicable, higher levels of imports are the main factors underlying anticipated increases in world prices for cereals, feed grains, vegetable oils, meat, dairy products, and sugar. At the margin, production of these commodities should shift to other countries that have a comparative advantage, including those in Latin America, the region of the former Soviet Union, and lower-income Asia and Africa. OECD countries that apply relatively low protection rates, such as Australia and New Zealand, are also expected to benefit from a more level playing field. The relocation of some production from countries with high subsidies to those with lower subsidies is not, however, expected to occur immediately. Thus, in the short run, higher prices may be anticipated. Any price rises should, however, be viewed in the context of the continuation of the long-run decline in world prices that has characterized commodity markets for the past fifty years.

A range of studies have attempted to quantify the possible effects of trade reform on world income, production, trade, and prices[9]. The most widely cited and detailed study, in terms of the coverage of developing countries and agriculture, is that by Goldin, Knudsen, and Van der Mensbrugghe (1993). Their general equilibrium analysis suggests that partial trade liberalization, such as has been accomplished in the Uruguay Round, will lead to small increases in the price of grains (except rice), sugar, meat, dairy products, vegetable oils, and textile fibers. World prices of rice, fruit and vegetables, beverages, and coffee are expected to decline. Nevertheless, as is evident from Table 3, the anticipated price changes are modest and, because they will be felt over a period of almost ten years, are not expected to lead to any significant price dislocation in any given year. More recent analysis, which includes the actual tariff submissions agreed at Marrakech rather than the anticipated ones, suggests that the price changes resulting from the Uruguay Round are likely to be even more modest than the changes indicated in Table 3 (see Goldin and Van der Mensbrugghe, 1995). Indeed, the price changes associated with the Uruguay Round are likely to be overwhelmed by the normal instability in the world markert and by the longer term secular downsward trend in real commodity prices. Viewed in this light, it may be argued that the Uruguay Round is unlikely to lead to any changes in prices beyond those that have already been experienced by countries. Indeed, because greater participation in world markets and reduced uncertainty regarding trade are likely to be associated with more stable world prices, the overall effect of the Uruguay Round on prices may be anticipated to be a smoothing of the long-run distribution of prices around a declining trend.

## IMPACT OF THE URUGUAY ROUND ON AGRICULTURAL

### EXPORTS AND IMPORTS OF ARAB COUNTRIES

To assess the impact of the changes in prices and trade on the Arab countries, it is necessary first to review their structure of production, consumption, and trade. Because the Uruguay Round embraced the full range of economic activities, an evaluation of its impact needs to go beyond a single sector, such as agriculture. Indeed, the extent to which countries can benefit from the Uruguay Round will be determined by their flexibility in adjusting the sectoral composition of their economic activities in favor of those sectors in which they enjoy the most dynamic competitive advantage. Potential losses or gains in the agricultural sector, consequently, need to be evaluated in light of the impact of the Uruguay Round on the rest of the economy and on all relative prices, not least those of labor, capital, and land. In this section, the focus is primarily on the agricultural sector, with a view to providing a review of the current situation and the likely changes to be associated with the round. To the extent that the analysis is sectorally focused, it should be

---

[8] The 1992 CAP reform will allow the European Union to meet its GATT commitments for cereals but not for beef or sugar. The European Union may need to decrease its support for these two subsectors in order to keep its commitment to the Uruguay Round agreement (Josling and Tangermann, 1992).

[9] Examples of these studies are presented in Goldin and Knudsen (1990), which contains a series of papers that have used both partial and general equilibrium models to project the effects of agricultural trade liberalization on world prices, income, and trade.

viewed as a tentative first step in the analysis of agriculture in the Arab countries, which requires further development to reflect economy-wide considerations.

## EXPORT STRUCTURE

On the basis of their export structure, Arab countries can be divided into three main groups. The first is composed of the oil exporting countries and includes Algeria, Libya, Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates. For these countries the largest source of export earnings is petroleum exports, and agriculture's share of the total value of exports is less than 5 percent. The second group is composed of « diversified exporters » and includes Egypt, Syria, Jordan, Lebanon, Morocco, and Tunisia. In this group, the share of agricultural exports in total exports ranges from 8 percent for Egypt to 22 percent for Syria. The main agricultural commodities exported are fruit and vegetables[10], live animals, cotton lint, pulses, and, for some countries, cereals. Finally, Mauritania, Somalia and Sudan constitute the « primary exporters » group because more than 50 percent of their exports are composed of two or three commodities: Mauritania's main agricultural exports is fish; Somalia exports cattle and bananas; and Sudan exports cotton and cattle. The Arab countries' total exports of agricultural commodities constitute less than 2 percent of the world total (see Table 1).

The new dynamic areas for agricultural production in the Arab countries include barley, rice, wheat, milk and cream. Many countries such as Lebanon, Egypt and the Maghreb countries have good potential for food processing. However, production and exports of processed food have been constrained by high trade barriers in OECD countries.

## IMPORT STRUCTURE

Total agricultural imports of Arab countries amount to around $21 billion, which is less than 10 percent of world agricultural imports. The main imported commodities are cereals (wheat, feed grains, and rice), followed by vegetable oils and meals, meats, dairy products, fruit and vegetables, coffee, tea, and sugar. The average self-sufficiency ratios are 51 percent for wheat, 28 percent for vegetable meals and 80 percent for meat. The largest agricultural importers are Saudi Arabia, followed by Egypt, Algeria, and the United Arab Emirates. The average share of agricultural imports in total imports is around 16 percent (excluding Sudan and Yemen, where agricultural imports constitute 51 percent and 31 percent of total imports, respectively). The major countries or regions from which Arab countries import their agricultural products are the European Union (around 33 percent), the United States (about 11 percent), Turkey, Latin America, Australia, and Thailand. The United States is the major supplier of bulk commodities such as cereals (wheat, corn, and rice), feed grains, and vegetable meals, whereas the European Union dominates in the provision of meat, dairy products, fruit and vegetables, and sugar. Brazil and Argentina are also important suppliers of vegetable oils and meals. Thailand competes with the United States for rice exports to the region. The leading markets for the United States are Egypt, Saudi Arabia, and Algeria which respectively absorb 24 percent, 26 percent, and 13 percent of total U.S. agricultural exports to the region[11].

Arab countries have also attempted to facilitate inter-Arab trade through various multilateral and bilateral trade agreements that prohibit the imposition of tariffs on agricultural commodities but do not prevent the use of nontariff barriers. In general, these agreements have not been effectively implemented and have not served to reduce barriers to inter-Arab trade. Thus, the accession of Arab countries to the WTO should be seen as providing stimulus to inter-Arab trade, to the extent that it will reduce nontariff barriers that restrict this regional trade.

## AGRICULTURAL TRADE POLICIES

Many changes have occured in the agricultural policies of Arab countries in the past decade. Since the mid-1980s, some countries (Egypt and Morocco) have moved from taxing their agricultural producers to subsidizing them. Table 4 presents the available nominal protection coefficients (NPCs) for Arab countries. Figures 1, 2 and 3 compare selected Arab countries' NPCs for selected commodities. Aside from tariffs, Arab countries have resorted to a range of nontariff barriers on agricultural imports and exports. These include quantitative restrictions such as import bans and quotas, import licenses, state monopolies over imports or exports, advanced import deposits, and fiscal charges. Most countries promote self-sufficiency policies for sensitive food commodities such as wheat, barley, and meats through guaranteed producer prices, state monopolies, and restrictions on imports. Table 5 shows the self-sufficiency ratios for certain

---

[10]The value of total Arab exports of fruit and vegetables was around $776 million in 1992.

[11] The appendix to this chapter presnts a summary of Arab countries' main agricultural exports and imports for the average of the two periods 1986-89 and 1990-92.

156

commodities in selected Arab countries. Arab countries have also adopted policies to reduce the dependency on food imports and to encourage exports of high-valued agricultural commodities. In the past few years, however, many countries have been moving toward the liberalization of their agricultural sectors by eliminating input subsidies, reducing guaranteed producer prices, reducing the number of subsidized commodities, and liberalizing the exchange rate and the trade regime (in Table 4, note the decline over time of some countries' NPCs). Consumer subsidies have also been reduced, although in most countries they persist for certain sensitive, basic food commodities such as bread and flour.

### EFFECTS ON ARAB COUNTRIES' AGRICULTURAL IMPORTS

In general, all Arab countries are net food importers and have benefited from low world food prices and the subsidized exports associated with food aid and the export subsidy and credit programs of the European Union and United States. If the volume of these export subsidies declines to abide by the new GATT provisions and production of major food commodities in the industrial countries also falls because of lower protection rates, then the resulting higher food prices could be detrimental for the Arab countries. If, as anticipated by Goldin, Knudsen, and Van der Mensbrugghe (1993), the Uruguay Round leads to higher prices for grains, meat, vegetable oils, meals, milk, and sugar and to lower prices for fruit and vegetables (see Table 3), trade liberalization in agriculture will increase many Arab countries' expenditures on agricultural imports and could undermine their agricultural trade balances[12]. In certain circumstances this could lead to higher food prices for the urban poor.

An examination of the Uruguay Round submissions by the Maghreb and the Mediterranean countries reveals, however, that these countries will not necessarily liberalize their wheat, coarse grains, sugar, meat, or milk markets by the end of the Uruguay Round implementation period. The ceiling bindings suubmitted provide these countries with the right to maintain, or even to increase, their tariff levels and to continue to subsidize domestic producers at past levels. Much of the cost of this protection is paid by consumers, who will be compelled to pay higher than world prices for food products. To the extent that tariffs are reduced, consumers will benefit, and these reductions in tariffs should offset any possible negative implications for consumers that arise from higher world prices. however, where consumers were subsidized, the negative impact of reduced consumer subsidies could be compounded by higher world prices. In practice, as noted above, the key question for consumers and producers is likely to be one of price instability. Small changes in world prices associated with the Uruguay Round are unlikely to alter the overall behavior of agricultural producers or consumers in Arab countries, but changes in the perception of risk could be significant and could affect patterns of saving and investment. To the extent that Arab countries pass on higher and less volatile food prices resulting from the Uruguay Round as weel as increased access to world markets to farmers, investment in agriculture should be stimulated and costs of hedging against risk, which currently is a significant drain on public expenditures, reduced.

### EFFECTS ON ARAB COUNTRIES' EXPORTS

Based on GATT figures, developped countries' tariff rates on food and agricultural products will decline by an average of 37 percent after the implementation of the Uruguay Round agreement[13]. The effect of these tariff reductions on Arab countries depends on the extent to which the trade reforms lead to changes in major agricultural export markets and affect competition. Arab countries export most of their agricultural products to the European Union (fruit and vegetables, olive oil), to each other (wheat, fruit and vegetables, live animals), and to other European countries (mainly Turkey), and very little to the United States (fruit and vegetables, cotton lint) or Asia. The Arab countries compete with each other in agricultural export markets and with Eastern Europe, Latin America, and other countries in the Middle East such as Israel, Turkey, and the Islamic Republic of Iran. Before the Uruguay Round agreement, the tariffs imposed on the major Arab agricultural exports were higher in the European Union than in the United States. The reduction of trade barriers in both these regions should lead to greater market access, especially for fruit and vegetables and textile fabrics. Increased market access may be anticipated to provide the opportunity to offset the potential negative effects of the forecast decline in the price of fruit and vegetables. For the Arab countries that export these commodities, higher prices for cotton, vegetable oils, meat, and grain (except rice) may be anticipated to improve the agricultural terms of trade.

One important consequence of the Uruguay Round for developing countries is that, because many of their exports benefited from reduced tariffs under the Generalized System of Preference (GSP) and other

---

[12] Although coffee and tea prices will fall and cotton prices will rise -which would improve the terms of trade of Arab countries - the share of these commodities in the import and export structures of Arab countries is small compared with their imports of cereals, fedd grains, meat, and dairy products and with their exports of fruit and vegetables.

[13] This covers a 36 percent reduction in tariff rates for fruit and vegetables; 39 percent for grains; 26 percent for dairy products; and 40 percent for oilseeds, fats, and oils.

preferential trade agreements, the decline of all tariff barriers will diminish their margin of preference. This could increase the export competition from non-GSP recipient countries[14]. The GSP, however, has included only a limited set of agricultural products, and developing countries have continued to face quantitative restrictions and other barriers to their exports to OECD markets. The impact of the Uruguay Round on the countries that have benefited from GSP will depend on the extent to which it will lead to greater market access for the Arab countries' products and on whether the lower margin of preference attributable to liberalization is offset by the overall growth in the market and the decline in trade barriers. This is a function of the ability of Arab countries to market their exports in the European Union, United States, and other industrial countries.

The principal agricultural export commodities of Arab countries are fruit and vegetables, and these are mainly shipped to the European Union. Before the Uruguay Round agreement, fruit and vegetables benefited from preferential tariffs but faced nontariff barriers in the European Union. The tariffs varied by product, country of origin, and season -with higher tariffs being imposed during the periods when imports competed with domestic production. In 1985, effective tariffs in the European Union averaged 6-7 percent for fresh fruit and vegetables and 15-16 percent for processed fruit and vegetables (see Islam, 1990). The decline in the GSP and preferential tariff margins owing to the Uruguay Round will erode the benefits of increased market access. However, as noted earlier, the European Union's (GSP and preferential agreements covering fruit and vegetables have been fairly limited and accompanied by various quantitative restrictions. Accordingly, the erosion of GSP benefits is not anticipated to lead to dislocation of export markets.

The nontariff barriers on fruit and vegetables include quotas, VERs, variable levies, minimum price systems, and countervailing duties and taxes, as well as technical and health standards. Trade in fruit and vegetables will be liberalized in most regions because of lower tariffs and nontariff barriers under the Uruguay Round agreement. Furthermore, the greater transparency of phytosanitary standards should facilitate access to European Union markets. Greater transparency and less uncertainty regarding standards will also enhance investment in export-oriented agriculture. It should particularly benefit fruit and vegetable exports, since these have been subject to the greatest uncertainty in terms of phytosanitary standards and nontariff barriers. Arab countries may be anticipated to benefit from the potential offered by the Uruguay Round agreement in this area. Furthermore, even though the Uruguay Round may lead to a short-run decline in fruit prices, in the long run, because the demand for fruit and vegetables is income elastic, the prices of these products are expected to remain relatively robust compared with those of other agricultural commodities.

## COUNTRY ANALYSES

The structure of economic activity, including agricultural production, consumption, and trade in Arab countries is not homogeneous. Accordingly, the impact of the Uruguay Round will differ across countries. To explore this specificity, the following pages present preliminary analyses of the impact of the Uruguay Round on agriculture in selected Arab countries[15].

### OIL EXPORTING COUNTRIES

#### *Algeria*

Algeria has to rely on imports for most of its food needs. Its overall self-sufficiency ratio for food is around 20 percent, and agricultural imports account for almost 25 percent of its total imports. Its major import suppliers are the United States for dairy products, grains, and vegetable oils (subsidized mainly through export subsidy programs); the European Union for grains, dairy products, flour, semolina, and rice; and Turkey for pulses. The main imports are milk powder, wheat, flour and semolina, vegetable oils, coffee and tea, sugar, soybean meal, tobacco, and cotton. Algeria's agricultural export potential in the longer term is likely to be based on dates, citrus, fruit, and wine. Wine and citrus exports are subject to trade restrictions in European Union markets. Although Algeria has started liberalizing the agricultural sector, state monopolies continue to dominate the supply of basic food commodities such as cereals, oilseeds, and dairy products. Cereals, milk, and tomato production are encouraged through guaranteed support prices and

---

[14] Most Arab countries receive GSP treatment from the European Union and Japan. Egypt, Jordan, Mauritania, Morocco, Oman, Somalia, Sudan, Syria and Tunisia receive GSP treatment from the United States. In addition, Algeria, Egypt, Jordan, Morocco, Tunisia, and Syria receive preferential treatment through bilateral agreements with the European Union. In general, the GSP scheme for agriculture is commodity selective and entails reduced tariff rates rather than tariff exemptions. Mauritania, Sudan, and Somalia receive an additional special treatment because of their status as least developed countries.

[15] This section draws on data from the United Nations Food and Agriculture Organization (FAO), the U.S. Department of Agriculture, and the World Bank.

import controls. Consumer prices for bread, semolina, flour, and milk are subsidized. Algeria has become almost self-sufficient in poultry production by imposing import controls and subsidizing imported feed. The liberalization of the import regime is anticipated to be associated with a reduction of the self-sufficiency levels, at least in the short run. However, to the extent that consumers benefit from lower world food prices, and farmers from lower machinery and other input prices, domestic liberalization is expected to lead to improvements in agricultural production, consumption, and trade.

Because Algeria is such a large net food importer, it will stand to lose if the Uruguay Round agreement leads to higher food prices and from the decline in the United States' EEP and in other export subsidy programs. However, as a result of improved access to OECD markets, Algeria could improve the volume of its citrus and other fruit exports, building on its low base in this area.

### Saudi Arabia

Saudi Arabia has relied on direct government subsidies and high domestic producer prices to promote domestic production of key commodities such as cereals, poultry, and oilseeds. The extent of support for domestic producers is reflected in the fact that wheat production rose from 3,000 tons in the mid-1970s to over 4 million tons in 1992. By the mid-1980s, Saudi Arabia was producing more than it could consume; by 1992, 2.5 million tons, well over half of its production, was sold on world markets. Subsidies to wheat producers, which exceeded those in even the most generous OECD countries, transformed Saudi Arabia from a major importer to the world's sixth largest wheat exporter. In 1980, domestic procurement prices for wheat were set at $1,000 a ton whereas world prices were around $190 a ton. More recently, procurement prices for wheat have declined to around $480 a ton ; world prices, after declining, have rebounded to their 1980 level. In addition to the direct output subsidies, agricultural input subsidies assist domestic producers. Farmers pay only a small fraction of the full economic cost of the key inputs (land, irrigation infrastructure, and water) and also enjoy subsidized agricultural credit, machinery, and other equipment. For wheat production alone, direct subsidies were estimated to reach $2.5 billion a year, with this figure not including the costs associated with the mining of nonrenewable fossil underground water supplies (*The Financial Times*, November 17, 1994).

As a result of growing awareness of the budgetary and environmental costs of agricultural subsidies, Saudi Arabia is reviewing its wheat program and its overall agricultural development strategy. It may be anticipated that future agricultural growth will be less dependent on public expenditures and will more closely follow Saudi Arabia's competitive advantages.

By liberalizing its agricultural sector, Saudi Arabia will maximize its benefits from the Uruguay Round agreement. In particular, to the extent that wheat and poultry prices rise on international markets, the reduction in subsidies going to protected domestic wheat and poultry producers could be accelerated. Other than wheat, Saudi Arabia exports dates, melons and grapes. However, Saudi Arabia is also the largest importer of agricultural products in the Arab region and imported approximately half of its food supply in 1990-93. The primary imports are corn, barley, animal feed, live animals, and inputs for its food-processing industry. A further reduction in the import tariffs for these commodities will benefit consumers and, by improving real incomes, will improve overall economic performance. The United States supplies about 10 percent of Saudi Arabia's food imports, and the European Union provides one-third.

Because Saudi Arabia is likely to remain a large food importer, it remains vulnerable to higher world prices. On balance, however, given that it is a wheat exporter and also exports other products, such as fruit, that will enjoy improved market access, and given that the Uruguay Round is also anticipated to lead to more stable world food prices, the Uruguay Round offers considerable opportunities to Saudi Arabia. Not surprisingly, Saudi Arabia has expressed interest in joining the WTO.

### DIVERSIFIED EXPORTERS

### Egypt

The Egyptian agricultural sector is fairly diversified, with high self-sufficiency ratios in many products, including rice, cotton, citrus fruit, fluid milk, cheese, beans, poultry, and lamb meat (see Table 5). Egypt nevertheless relies on food imports to meet about half of its food needs. Its main agricultural suppliers are the United States for cereals, vegetable oils and meals, and cotton; the European Union for meats and dairy products; and the EFTA for forest products. In addition, Egypt imports wheat from Australia and oilseeds from Latin America. Egypt benefits from food aid and from the EEP and several other commodity-specific U.S. export and credit programs. As part of the government's recent Economic Reform and Structural Adjustment Program, Egypt has taken several measures to liberalize its agricultural sector. Controls on crop areas and deliveries have been removed, input subsidies have been eliminated (except for water), and producer prices and marketing have been liberalized. However, the government still intervenes in certain agricultural subsectors, including through its control of the marketing of sugar and its program of subsidies for irrigation and water. In addition, poultry imports are restricted, and import licenses are required for many

food products. At present, import tariffs on food items vary from 1 percent to 60 percent, with the highest rates applied to poultry, live animals, and bananas and the lowest rates applied to cereals and oilseeds[16]. Egypt subsidizes the consumer price of bread, vegetable oil, and sugar. Egypt's agricultural exports provide around 15 percent of its total export earnings. Its major exports are rice, followed by citrus fruit (mainly oranges), cotton, other fruit and vegetables (mainly potatoes), sheep, and goat. Its largest export markets are Europe and the Middle East. Egypt benefits from the GSP in its trade with the United States and has a bilateral preferential agreement with the European Union. Certain fruit and vegetables, such as onions, nevertheless remain subject to quantitative restrictions in the European Union.

Egypt is a GATT member and in the Uruguay Round agreement has committed itself to lower border protection rates on agricultural products. As a result, the price of most imports is expected to decline over the coming decade. If the benefits of lower tariffs are passed on to consumers, domestic food prices are expected to decline in real terms even if the Uruguay Round agreement leads to short-run increases in world prices. Because Egypt is a major recipient of subsidized U.S. agricultural exports through the EEP and other programs, however, any contraction of these export subsidy programs will serve to raise the food import bill, expecially for wheat.

Although the Uruguay Round agreement may increase expenditures on imports, it is simultaneously expected to improve export earnings. Yeats (1994) has predicted that Egypt will gain from the Uruguay Round agreement[17]. The average applied pre-Uruguay Round tariff rates faced by all Egyptian food and feed exporters (taking into account GSP treatment) are 21.2 percent in Japan, 12 percent in the European Union, and 0.6 percent in the United States. If, as Yeats has predicted, industrial countries' average most-favored-nation (MFN) tariff rates on agricultural products decline by 37 percent, then for Egypt this is projected to result in an increase of 7.4 percent in the value of agricultural exports to the European Union and in a 0.3 percent increase in the value of agricultural exports to the United States. Egypt's exports of food and feed are not subject to nontariff barriers in Japan and the United States, but 20 percent of these products face nontariff barriers in the European Union. Yeats has forecast that the percentage of Egyptian exports that face nontariff barriers in the OECD markets will fall from 32 percent to 2 percent after the Uruguay Round. The reduction in nontariff barriers will improve the access of Egyptian exports. However, the margin of tariff preference under the GSP and other preferential agreements is expected to be eroded, and fruit, vegetable, and rice prices could decline after the Uruguay Round agreement, so that the benefits from greater market access could be dampened. In contrast, the combination of the reform of the Multifibre Arrangement (MFA) and improved world cotton prices offers the potential for a revitalization of the cotton and textile sector. Domestic reforms, including a reduction in taxes and export tariffs, are required, and these need to be passed on to improve incentives to farmers and agro-processors in order to maximize the benefits accruing from the Uruguay Round agreement. Protectionist policies that aim to achieve self-sufficiency in strategic crops such as wheat, and to underpin the expansion of high-value commoditity exports such as cotton, rice, citrus, and potatoes, should give way to an agricultural strategy focusing on food security and Egypt's comparative advantages rather than self-sufficiency. The scarcity of water and arable land makes it imperative that Egypt, like other countries facing acute ecological constraints, orient agricultural and other economic activity toward the most efficient and rational use of nonrenewable factors of production.

### Morocco

By Arab standards, Morocco has a large and diverse agricultural sector. It is the only Arab economy with a positive trade balance for food commodities. Most of its trade is with the European Union, followed by the United States, Argentina, and West Africa. Morocco's major agricultural exports are fish and fruit and vegetables. It also exports other commodities such as cotton, paper pulp, hides and skins, olive oil, and pulses. Morocco receives preferential tariff treatment for its agricultural exports to the European Union, but many of its exports, including fruit and vegetables, olive oil, and wine, face quantitative restrictions under the CAP. Morocco enjoys duty-free access to the French market for some products, including potatoes, certain fruit and vegetables, citrus juice, and wine. Morocco is a large recipient of subsidized exports through food aid and the United States' EEP and Export Credit Guarantee Program. Morocco's main imports are cereals, vegetable oils, forest products, sugar, tea, coffee, cotton, and dairy products.

Morocco has recently taken steps to liberalize its trade, but import licenses remain for many commodities, including meat, dairy products, and certain fruit and beverages. Furthermore, the government continues to monopolize the import of grains, vegetable oils, sugar, tea and tobacco. The average import tariff for all agricultural products is around 25 percent). The highest tariffs (45 percent) are imposed on

---

[16] At the end of 1994, the highest tariff rate of 80 percent was reduced to 60 percent (on pork, whole milk powder, and eggs), while most other tariffs fell by 5 to 10 percentage points.

[17] On the basis of Yeats's SMART simulation model, Egypt is projected to gain $8 million of increased agricultural exports to the European Union after the Uruguay Round is implemented.

meat, dairy, and fruit imports to stimulate domestic production, and the lowest duties (2.5 percent) are applied to grains. In addition to the customs tariff, imports are subject to an ad valorem tax rate of 15 percent as weel as other fees and surchages. Consumer subsidies remain on basic foodstuffs such as flour, edible oil, and sugar.

Morocco, like other Uruguay Round signatories, is committed to « tariffying » its existing nontariff barriers and to reducing tariff rates by 24 percent over the ten-year implementation period. However, for 1995, the first year of the Uruguay Round implementation period, it set a substantially higher binding rate of protection for meats, sugar, rice, wheat, and oilseeds than the rates that were applied previously. Starting in 1995, the tariff-equivalent rates of protection were calculated as the difference between world prices and domestic prices occuring during the base period 1986-88, and then customs duties, set at their maximum rate of 45 percent, and a tax rate of 15 percent were added to the tariff-equivalent rates. Consequently, the binding tariff rates submitted to the GATT were substantially higer than the actual tariff-equivalent rates. Although these tariffs are to be reduced by 24 percent, many commodities will still have higher protection rates at the end of the Uruguay Round period than before the agreement. For wheat, for example, although the tariff-equivalent rate for 1986-88 was 130 percent and the 1994 rate was 110 percent, the tariff rates submitted to the GATT for 1995 were set at 190 percent. This rate will be reduced by 24 percent to 144 percent in 2005, but it will remain higher than the pre-Uruguay Round level of 130 percent. In the Moroccan Uruguay Round submission, as in that of many other countries, this type of tariff excalation was applied to many « sensitive » commodities, resulting in no or minimal liberalization for wheat, coarse grains, sugar, oilseeds, and milk.

Application of the higher binding ceilings would mean that Moroccan consumers would pay higher food prices. Given that Morocco previously benefited from subsidized exports from the United States and the European Union, the price paid for cereal imports would also rise. Higher ceiling bindings imply that the government has reserved the right to increase the protection of domestic producers from world competition. To the extent that tariffs are not reduced, or that they are increased, domestic producers are unlikely to feel the pressure of international competition, which serves to increase productivity and efficiency.

Export market opportunities are expected to improve with the implementation of the Uruguay Round agreement. In particular, the elimination of nontariff barriers and the application of transparent phytosanitary standards is expected to provide a more robust investment climate for hight-value export products, including fruit, vegetables, citrus, and flowers. Whereas Morocco has considerable potential in these areas, its potential for exports to the European Union has been frustrated by a range of trade barriers designed to protect southern European producers. Through improved production techniques and more sophisticated marketing, Morocco should be able to capitalize on the reduced trade barriers facing exports to the United States, Canada, Japan, and Arab countries. It could reduce its dependence on the European Union, to which it currently sends over 80 percent of its high-value agricultural exports. This diversification would serve to offset the potential negative impact on Morocco of an erosion of its preferential access to European Union markets provided through bilateral arrangements.

Morocco's agricultural growth has been underpinned by protectionism, which has served to raise domestic prices, and by input subsidies, especially for irrigation water and credit. Subsidies to these inputs are not sustainable, and the cost of both water and subsidies to farmers is anticipated to increase. At the same time, trade reform will lead to lower output prices. Consequently, farmers will come under increasing pressure to improve productivity and efficiency. In meeting the challenge of competitiveness, the farm sector and export enterprises will reap the benefits of trade liberalization.

### Tunisia

Tunisia is a net importer of food and agricultural products, notably cereals, livestock, meats, dairy products, vegetable oils and meals, sugar, coffee and tea. Agricultural products account for 13 percent of its total imports. Its main trading partners are Europe, Libya, and the United States. Tunisia, like Morocco, receives large quantities of subsidized exports from the United States and the European Union. Agricultural imports are subject to trade restrictions applied through import licenses, customs duties, and tariffs. Tariffs on agricultural products vary between 15 percent (on sugar) and 43 percent (on high-value products such as meat, vegetable oils, and processed food).

Tunisia's major exports are olive oil, which constitutes 50 percent of its agricultural exports, followed by fruit (mainly citrus, palm date, and almonds), vegetables, and fish. Although it has a prefential agreement with the European Union, Tunisia faces quantitative restrictions on its exports of wine, oranges, potatoes, dates and olive oil to the European Union. The government's objective is to promote agricultural production and exports. It has protected producers through high support prices, various types of subsidies, and import restrictions applied through import licenses, customs duties, and tariffs. The government is slowly trying to liberalize agricultural trade and reduce price subsidies. It joined the GATT in 1990. Supplementary customs duties do not apply to agricultural products, and for most other commoditities they are scheduled to be

eliminated within the next three years, with the object of reducing the average basic tariff to a target of 25 percent, down from a level of about 36 percent.

The effect of the Uruguay Round agreement on Tunisia's imports would be similar to the agreement's impact on Egypt and Morocco. To the extent that the Uruguay Round results in higher prices for the basic imported food commodities and a diminished volume of subsidized exports from the United States and the European Union, it would increase import costs and reduce the agricultural trade balance. Lower tariffs would also reduce government revenues. However, if higher world prices are passed on to domestic producers, the farm sector would benefit, and support programs would become less expensive. On the export side, improved market access for fruit, vegetables, citrus, and processed products, and higher prices for olive oil, would be beneficial and would improve Tunisia's agricultural terms of trade. As a result of greater transparency and less volatile prices, investments in the agricultural sector should become more attractive, while the cost of risk management to the government should be reduced. The overall effect of the Uruguay Round agreement should thus to be encourage the private sector and to diminish the need for government intervention in the agricultural sector.

### Jordan

Jordan has applied for GATT membership and has a strong interest in greater market access and more stable trading conditions for its high-value exports to other Arab countries and to Central and Western Europe. A growing scarcity in water resources in Jordan, as in most other Arab countries, implies that it is increasingly necessary that production be focused on products with a high return to water use. Citrus and fruit and vegetables provide such high returns, but they currently face restrictions in the European Union. Jordan is currently focusing its efforts in agricultural trade on regaining its share of markets in Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates, with which trade was disrupted in the wake of the regional conflict in the Middle East. Jordan also has good prospects of exporting agricultural commodities, particularly fresh fruit and vegetables to the West Bank and Gaza and to Israel.

Jordan's food imports are subsidized under the EEP and U.S. food aid and export credit programs, and as a result the United States is its main source of wheat, barley, corn and rice. In addition, Jordan imports meat and live animals, sugar, dairy products, and oilseed products from the United States and other countries. Import restrictions and state monopolies over procurement serve to raise domestic producer prices and protect domestic producers. Consumer subsidies on basic foodstuffs mean that this protection is funded from public expenditures. As in other Arab countries, there is an increasing recognition that, from the perspective of public expenditure and natural resource use (mainly of water), these policies are not sustainable. Menbership in the GATT therefore is likely to be associated with a reform of Jordan's trade policies. This would place Jordan on a sustainable growth path in which agricultural growth is underpinned by high-value crops.

### Syrian Arab Republic

The Syrian Arab Republic has aimed to achieve self-sufficiency in major food products by restricting imports and foreign exhange and by setting relatively high domestic producer prices. Recently, the private sector has been allowed to import several commodities that were previously under government control (rice, sugar, tea, coffee, vegetable oil, and butter). However, wheat and flour imports are still banned. Consumer prices for bread, rice, sugar and tea are subsidized through a rationing system, and producer prices for wheat and other grains are set above world market prices to stimulate production.

Syria has traditionally exported cotton lint to Europe and to other Arab countries through a monopolistic government procurement and export structure. In addition, it exports sheep, poultry products, and fruit an vegetables to Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates, and pulses to Egypt, Lebanon and Jordan. Syria's main agricultural imports come from the European Union and Turkey (wheat and vegetable oils). Rice, corn, and soybeans are imported from the United States. Some comodities are also imported from Southeast Asia, Egypt and Brazil. In recent years, Syria has not benefited from subsidized exports from the United States, but its exports to the United States do not face any trade barriers.

The Uruguay Round agreement is anticipated to strengthen cotton prices, and this, together with a reform of European Union and other OECD cotton markets, should improve the market for cotton exports and offer potential market growth to Syria and other high-quality cotton exporters. Higher world meat prices and improved market access are expected to enhance Syria's meat sector. Meanwhile, higher world prices for wheat and other grains -and, more significant, a domestic commitment to lower protection- would reduce the costs of government support for these commodities.

PRIMARY EXPORTERS

*Somalia and Sudan*

Somalia and Sudan are heavily dependent on pastoral activities and export most of their cattle to other Arab countries. Somalia exports some bananas to Italy. Because both are classified as least developed countries, their exports face no trade restrictions other than those associated with phytosanitary and health regulations. Somalia is an extremely poor country and is highly dependent on imports to meet its food requirements. It, and other food-importing least developed countries, are the most vulnerable participants in world trade. To the extent that the Uruguay Round agreement results in higher cereal and other food prices, these fragile economies may require balance of payments suport to meet unanticipated shortfalls and to ensure that potential negative effects of the Uruguay Round are compensated by those who stand to benefit from the overwhelming gains of the agreement. Higher world cereal prices may not, however, lead to greater poverty in these importing countries, because to the extent that the higher prices are passed on to domestic farmers, and the benefits of more transparent and stable markets are reflected in improved incentives and lower government and private expenditures on risk management, rural communities in the least developed countries will benefit. It is in these communities where the greatest poverty is found.

Sudan is a net food importer, but its cotton exports provide it with a positive balance in agricultural trade. The factors associated with the Uruguay Round agreement that will benefit the Egyptian and Syrian cotton exporters will equally advantage Sudan's cotton exporters. Similarly, there is a risk that higher cereal prices will negatively affect the poor. This requires vigilance on the part of the government and international agencies. The combination of domestic and external reforms is anticipated to facilitate agricultural growth. The reduction in preferences accorded to Sudan and Somalia could, however, erode their markets and intensify competitive pressures. Under the Uruguay Round agreement, least developed countries are exempt from many of the commitments to reduce protectionism and engage in trade reform. Nevertheless, domestic reforms are vital if least developed countries are to avail themselves of the opportunities offered by the Uruguay Round agreement.

## TRADE, AGRICULTURE, AND THE ENVIRONMENT

Environmental issues increasingly require integration into analyses of trade and agriculture[18]. This is particularly true in the Arab countries, where agricultural production rests on relatively fragile ecological foundations. In particular, the exhaustion and degradation on nonrenewable water supplies and growing competition from nonagricultural water users are anticipated to sharply influence the cost and availability of water, a vital factor of production. In many Arab countries, water scarcity threatens to act as a binding constraint on agricultural growth and overall development. The development of appropriate pricing and other mechanisms to ration water use is required, with a view to securing sustainably high growth. Evidence suggests that the continuation of current practices fosters suboptimal and unsustainable patterns of water use, and that inefficiencies arising from inappropriate pricing at the microeconomic levels have been compounded by distortions in relative prices resulting from macroeconomic and trade policies.

Results derived from Goldin and Rolan-Holst's (1995) computable general equilibrium analysis of the relationship between trade and environmental policies in Morocco indicate that, if undertaken in isolation, reforming water prices in the agricultural sectors will have a contractionary effect on the economy[19]. This is to be expected, since the water price increase basically takes the form of a distortionary tax on a leading sector of the economy. Incomes and the real consumption of both rural and urban households decline slightly, and real consumption falls somewhat more as increased water prices are passed through to agricultural commodities. Thus, the static effects of the policy appear to be detrimental, but as water use is reduced the economy moves decisively toward greater sustainability.

Trade liberalization alone has more salutary effects on the static efficiency of production and real incomes[20]. Economy-wide real GDP rises only slightly because the main factors, labor and capital, are fixed in total supply in the analysis. Despite this, household incomes and real consumption post significant gains as substantial import barriers are reduced, domestic purchasing power rises, exports become more competitive, and resources are allocated more efficiently accross the economy. Two drawbacks, however, are associated with this typical neoclassical result. First, the government has forgone important sources of

---

[18] For more discussion on this topic, see Goldin and Van der Mensbrugghe (1992).

[19] In this first simulation, prices for irrigation water, which accounts for 92 percent of the country's marketed water use, are doubled from 8 percent to 16 percent of urban water prices.

[20] This second simulation entails the liberalization of all nominal tariffs, which in the database average 21 percent across the whole economy and 32 percent in agriculture.

revenue by eliminating tariffs ; the budget deficit increases by as much as 35 percent. Second, the expansionary influence of *liberalization increases* domestic water use substantially. Thus, the economy is on a more growth-oriented, but less sustainable, trajectory.

Combining both trade and water reform would confer substantial advantages to the economy, both in the medium and long term[21]. The expansionary effects of trade liberalization are largely retained, but reforming water prices still induces substantial reductions in agricultural (and economy-wide) water use. Although this conservation is partially offset by expanding demand in urban sectors, the net result for the economy is less water consumption. Thus, the higher growth path under the combined policy is sustainable. The government budget still declines appreciably with tariff revenues, but this is offset by alternative, nondistortionary sources of revenue. The combination of *economy-wide and sectoral reforms* thus provides a win-win solution, which provides the basis for sustainable growth and significantly higher incomes. Trade reform alone, it is suggested, may facilitate agricultural sector growth, but this is not *sustainable unless it is undertaken in tandem* with a reform of water and other environmental resource prices. It also may need to be accompanied by fiscal reforms.

## CONCLUSIONS

The Uruguay Round agreement of the GATT will have important consequences on the agricultural sectors and the overall economies of Arab countries. Most studies show that world prices for many food commodities imported by Arab countries will rise because of lower protection rates in industrial countries and a decline in the volume of subsidized exports. Most Arab countries are net food importers and have benefited from large volumes of export assistance and food aid. Their agricultural terms of trade could deteriorate as a result of the Uruguay Round agreement, although higher import costs for foodstuffs are anticipated to be offset by *improved export revenues*. The rise in food prices could be more significant for oil producing countries, which import most of their foods items. For other Arab countries, it is partially offset by the incentive provided for higher domestic production and *investment in agriculture*. For the vulnerable least developed countries, temporary compensatory assistance should be offered if necessary to provide balance of payments support for those countries that suffer unanticipated shortfalls due to higher world prices.

The impact of the Uruguay Round agreement on any country will mainly depend on *its domestic economic environment*, rather than on changes in external prices or markets. The extent to which governments facilitate a flexible and transparent trading environment and minimize the transaction costs involved in pursuing existing, or *establishing new*, trade opportunities will critically influence the extent to which the Uruguay Round agreement will be able to facilitate trade expansion and economic growth. The transmission of the benefits of the Uruguay Round agreement to *domestic producers and consumers* is essential because this will determine the extent to which higher and more stable world prices, improved transparency, and greater market access are translated into improved incentives to domestic producers, consumers, and investors.

Given the natural resource and environmental constraints facing Arab countries, economic policies are required that encourage more efficient use of scarce resources. This implies that Arab countries increasingly will focus their agricultural activities in high-value-added and processed products. The Uruguay Round agreement offers considerable scope for development of these products and will reduce trade barriers that hitherto have curtailed exports to the European Union and *other high-income markets*.

In this chapter, we have analyzed only the effects of liberalization of *the agricultural sector*. It should be stressed that a full evaluation of liberalization requires an economy-wide analysis. Improvements or setbacks in one sector cannot be examined in isolation and are in an inevitable part of economy growth. Indeed, the decline of the agricultural sector is often an indicator of development and, rather than being a cause for alarm, may signify a maturing of other more dynamic and less protected parts of the economy. The key question is that of the dynamic comparative advantage *of the country concerned*. The maximization of the benefits offered by the Uruguay Round agreement may be achieved if governments focus their actions and public expenditures on the development of basic infrastructure, education, and health, rather than on protecting specific sectors or commodities. The phasing out of the MFA and the reduction in OECD protection in other sectors, such as in textiles and clothing[22] and small-scale manufacturing, offer considerable potential to Arab countries, *as does improved market access* and transparency in trade in high-value and processed agricultural products, such as fruit and vegetables.

---

[21] The last simulation involves simultaneous trade reform and raising irrigation water tariffs.

[22] The MFA, which controlled world trade in textiles and garments, expired in December 1992, and the liberalization of the two sectors was incorporated in the Uruguay Round.

The Uruguay Round agreement marks a significant milestone in multilateral trade negotiations, building on the Tokyo Round through its conprehensive inclusion of agriculture and the new areas of trade in services, investment, and intellectual property. By binging all trade within a transparent rules-based system, the Uruguay Round agreement provides developing countries with means to enter established and protected markets.

However, the Uruguay Round has not fully achieved its bold Puntal del Este objective « to halt and reverse protectionism and to remove distortions to trade » (GATT, 1986, Part 1, paragraph 1). Distortions remain, and the playing field has not been completely leveled. OECD countries, and notably the European Union and the United States, retain a comprehensive system of subsidies and tariffs to protect domestic producers from world markets. Developing countries similarly have failed to remove distortions. Taking advantage of their exemption from the constraints on binding tariffs imposed on OECD countries, many developing countries have submitted tariff ceilings that are well in excess of historical levels, so that they could increase rather than reduce their tariffs and still meet Uruguay Round commitments. « Dirty tariffication » and the raising of tariffs is against the spirif of trade liberalization. Following the tariffication of all nontariff barriers in the Uruguay Round agreement, subsequent agreements are expected to reduce tariffs to well below historical levels.

In retropsect, the main achievement of the Uruguay Round agreement is likely to be its establishment of a comprehensive rules-based trading system. For many countries and commodities, the reductions agreed in the Uruguay Round agreement are modest.

Arab and other countries will benefit by going beyond the Uruguay Round agreement and committing themselves to trade reforms that seek to reduce impediments to trade. Unilateral reforms that entrench the process of liberalization will serve to maximize the potential gains offered by the Uruguay Round agreement. This is particularly the case in the agricultural sector, since Arab country agriculture is at a turning point. Trade reforms, in conjunction with other economy-wide reforms that enhance the efficiency of scarce natural, human, and financial resources, provide a historical opportunity for agriculture to contribute to sustainable growth in the Arab countries.

# REFERENCES

Food and Agriculture Organization (FAO), 1992 and various years, *Trade Yearbook* (Rome).

GATT, 1986, *Ministerial Declaration of the Uruguay Round*, Doc. 1396 (Geneva).

GOLDIN IAN and ODIN KNUDSEN, 1990, *Agricultural Trade Liberalization: Implications for Developing Countries* (Paris: OECD; and Washington: World Bank).

GOLDIN IAN, ODIN KNUDSEN and DOMINIQUE VAN DER MENSBRUGGHE, 1993, *Trade Liberalization : Global Economic Implications* (Paris: OECD; and Washington: World Bank).

GOLDIN IAN and DAVID ROLAND-HOLST, 1995, « Economic Policies for Sustainable Resource Use in Morocco » in *The Economics of Sustainable Development*, ed. by Ian Goldin and L. Alan Winters (New York: Cambridge University Press).

GOLDIN IAN AND DOMINIQUE VAN DER MENSBRUGGHE, 1992, *Trade Liberalization: What's at Stake?* OECD Development Center, Policy Brief No. 5 (Paris).

GOLDIN IAN AND DOMINIQUE VAN DER MENSBRUGGHE, 1995, « The Uruguay Round : An assesment of Economywide and Agricultural Reforms », in *The Uruguay Round and the Developing Economies*, ed. by Will Martin and L. Alan Winters, World Bank Discussion Papers, No. 307 (Washington).

HATHAWAY, DALE E. and MERLING D. INGCO, 1995, « Agricultural Liberalization and the Uruguay Round », in *The Uruguay Round and the Developing Economies*, ed. by Will Martin and L. Alan Winters, World Bank Discussion Papers, No. 307 (Washington).

INGCO, MERLINDA D., 1994, « How much Agricultural Trade Liberalization was achieved in the Uruguay Round? » (unpublished; Washington: World Bank, International Trade Division, October).

INTERNATIONAL MONETARY FUND, 1994, *Direction of Trade Statistics* (Washington).

ISLAM, NURUL, 1990, « Nontraditional Exports of Developing countries: The case of Horticultural Exports », in *The GATT, Agriculture, and the Developing Countries*, ed. by Nurul Islam and Alberto Valdès (Washington: International Food Policy Research Institute, September).

JOSLING TIMOTHY, and STEPHAN TANGERMANN, 1992, « MacSharry or Dunkel: Which Plan Reforms the CAP? ». Working Paper No. 92-10 (Davis, California: International Agricultural Trade Research Consortium, July).

ORGANIZATION FOR ECONOMIC COOPERATION AND DEVELOPMENT (OECD), 1991, *Agricultural Policies, Markets, and Trade: Monitoring and Outlook 1991* (Paris).

ORGANIZATION FOR ECONOMIC COOPERATION AND DEVELOPMENt (OECD), 1994, *Agricultural Policies, Markets, and Trade: Monitoring and Outlook 1994* (Paris).

UNITED STATES, DEPARTMENT OF AGRICULTURE, 1993, *Africa and the Middle East: International Agriculture and Trade Report* (Washington : Government Printing Office, July).

WORLD BANK, 1994, *World Development Report 1994* (New York: Oxford University Press).

YEATS, ALEXANDER J., 1994, « Export prospects of Middle Eastern Countries: A post-Uruguay Round Analysis », preliminary draft (Washington: World Bank, International Trade Division).

*166*

FIGURE 1 - NOMINAL PROTECTION (NPCs) FOR BREAD WHEAT, 1992



FIGURE 2 - NPCs FOR DURUM WHEAT, 1992



FIGURE 3 - NPCs FOR BARLEY, 1992

**TABLE 1. ARAB COUNTRIES: TOTAL AND AGRICULTURAL GDP AND TRADE FIGURES, 1992**
*(IN MILLIONS OF U.S. DOLLARS AND PERCENT).*

| Country | Total GDP | Total Merchandise Exports, f.o.b. | Imports, c.i.f. | Agricultural Value Added | Agricultural Exports | Agricultural Imports |
|---|---|---|---|---|---|---|
| Algeria | 35,674 | 10,729 | 8,131 | 5,403 | 52 | 2,250 |
| Egypt | 33,553 | 3,050 | 8,293 | 6,079 | 401 | 2,624 |
| Jordan | 4,091 | 1,220 | 3,257 | 300 | 187 | 733 |
| Kuwait | 21,703 | 4,325 | 6,205 | | 6 | 637 |
| Morocco[1] | 28,401 | 3,977 | 7,356 | 4,220 | 581 | 1,155 |
| Oman | 11,520 | 7,462 | 3,769 | 374 | 72 | 529 |
| Saudi Arabia | 111,343 | 2,269 | 33,273 | 6,844 | 532 | 4,751 |
| Somalia | 879 | 118 | 184 | 571 | 4 | 107 |
| Sudan[2] | 7,720 | 420 | 1,193 | 2,625 | 364 | 224 |
| Syrian Arab Republic | 17,236 | 3,093 | 3,490 | 5,138 | 664 | 711 |
| Tunisia | 13,854 | 4,044 | 6,434 | 2,467 | 338 | 593 |
| United Arab Emirates[3] | 37,068 | 24,149 | 19,983 | 637 | 534 | 1,792 |
| Yemen | 9,615 | 1,053 | 2,859 | 2,012 | 51 | 885 |
| Arab countries | 454,541 | 65,909 | 104,427 | 36,671 | 4,024 | 20,765 |
| World | | 3,687,000 | 3,846,100 | | 351,716 | 381,841 |
| Arab countries'trade as percent of worl trade | | 1.8 | 2.7 | | 1.14 | 5.44 |

Sources: GDP figures are from World Bank (1994). Total trade figures are from International Monetary Fund (1994). Agricultural trade figures are from FAO (1992).
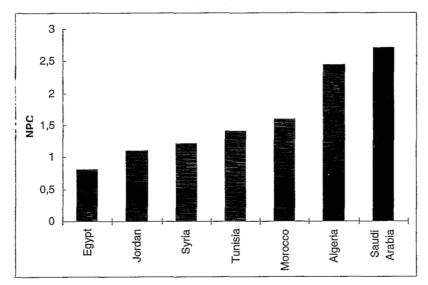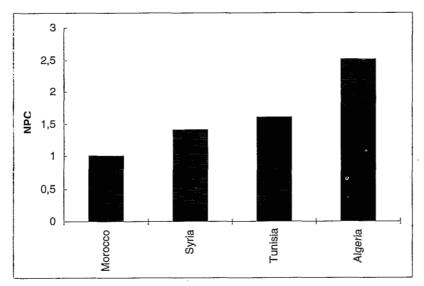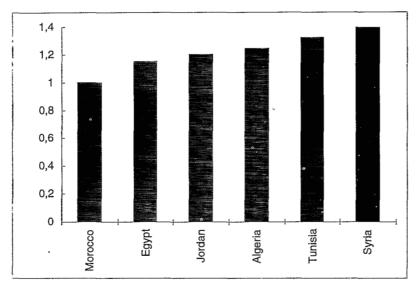[1]Morocco was hit by a severe drought in 1992; therefore, its 1992 agricultural production and export figures are below average.
[2]Estimates
[3]GNP figures

**TABLE 1 (CONTINUED)**

| Country | Agricultural Value Added as Percent of GDP | Total Exports as Percent of GDP | Total Imports as Percent of GDP | Agricultural Exports as Percent of Agricultural Value Added | Agricultural Imports as Percent of Agricultural Value Added | Agricultural Exports as Percent of Total Exports | Agricultural Imports as Percent of Total Imports |
|---|---|---|---|---|---|---|---|
| Algeria | 15.15 | 30.08 | 22.79 | 0.96 | 41.64 | 0.48 | 27.67 |
| Egypt | 18.12 | 9.09 | 24.72 | 6.60 | 43.16 | 13.15 | 31.64 |
| Jordan | 7.33 | 29.82 | 79.61 | 62.33 | 244.33 | 15.33 | 22.51 |
| Kuwait | | 19.93 | 28.59 | | | 0.14 | 10.27 |
| Morocco | 14.86 | 14.00 | 25.90 | 13.77 | 27.37 | 14.61 | 15.70 |
| Oman | 3.25 | 64.77 | 32.72 | 19.25 | 141.44 | 0.96 | 14.04 |
| Saudi Arabia | 6.15 | 2.04 | 29.88 | 7.77 | 69.42 | 23.45 | 14.28 |
| Somalia | 65.00 | 13.42 | 20.93 | 0.61 | 18.73 | 2.97 | 58.15 |
| Sudan | 34.00 | 5.44 | 15.45 | 13.87 | 8.53 | 86.67 | 18.78 |
| Syrian Arab Republic | 29.81 | 17.94 | 20.25 | 12.92 | 13.84 | 21.47 | 20.37 |
| Tunisia | 17.81 | 29.19 | 46.44 | 13.70 | 24.04 | 8.36 | 9.22 |
| United Arab Emirates | 1.72 | 65.15 | 53.91 | 83.80 | 281.23 | 2.21 | 8.97 |
| Yemen | 20.93 | 10.95 | 29.73 | 2.53 | 43.99 | 4.84 | 30.96 |
| Arab countries | 19.51 | 14.50 | 22.97 | 10.97 | 56.6356.63 | 6.10 | 19.88 |
| World | | | | | | | |
| Arab countries' trade as percent of world trade | | | | | | | |

TABLE 2. LEVELS OF SUPPORT FOR AGRICULTURE IN OECD COUNTRIES *(ALL COMMODITIES; IN BILLIONS OF U.S. DOLLARS)*

| Country | Transfers from Taxpayers (1) | | Transfers from Consumers (2) | | Total Transfers[1] (3) | | Producer Subsidy Equivalent (PSE)[2] | | PSE per Farmer (in thousands of U.S dollars) | | PSE per Hectare Farmed (in thousands of U.S dollars) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1987 | 1993 | 1987 | 1993 | 1987 | 1993 | 1987 | 1993 | 1987 | 1993 | 1987 | 1993 |
| Australia | 0.3 | 0.7 | 0.4 | 0.3 | 0.6 | 1.1 | 1.0 (10) | 0.9 (9) | 3 | 422 | | |
| Austria | 1.0 | 1.2 | 2.8 | 3.2 | 3.8 | 4.4 | 2.2 (47) | 3.0 (56) | 9 | 15 | 725 | 1,034 |
| Canada | 5.6 | 4.5 | 3.6 | 2.7 | 9.1 | 7.2 | 6.9 (51) | 4.8 (32) | 18 | 13 | 113 | 84 |
| European Union | 38.2 | 59.0 | 82.7 | 77.1 | 120.0 | 135.5 | 71.6 (49) | 79.6 (48) | 10 | 12 | 675 | 745 |
| Japan | 17.9 | 20.8 | 60.0 | 74.6 | 66.4 | 71.4 | 34.4 (74) | 35.0 (70) | 16 | 20 | 8,941 | 9,359 |
| United States | 51.6 | 68.6 | 31.4 | 19.4 | 81.5 | 87.5 | 35.5 (32) | 28.4 (23) | 21 | 17 | 103 | 82 |
| OECD | 120.3 | 165.3 | 192.9 | 196.6 | 297.8 | 335.3 | 165.0 (47) | 163.1 (42) | 13 | 14 | 162 | 163 |

<u>Source</u>: OECD (1991, 1994).
[1]Column (3) is not the sum of columns (1) and (2) owing to the contribution of government export and import tariff revenues
[2]Figures in parentheses are in percent.

TABLE 3 - WORLD AGRICULTURAL PRICES: MULTISECTORAL REFORM *(PERCENT CHANGE IN 2002 FROM BASE SIMULATION)*

| Commodity | Percent Change in Prices |
|---|---|
| Wheat | 3.5 |
| Rice | -5.0 |
| Coarse grains | 1.5 |
| Sugar | 8.0 |
| Beef, veal, and mutton | 2.8 |
| Other meats | -1.2 |
| Coffee | -8.2 |
| Cocoa | -5.7 |
| Tea | 0.1 |
| Vegetable oils | 1.7 |
| Dairy products | 5.1 |
| Fruits, vegetables, and beverages | -3.8 |
| Wool | -0.1 |
| Cotton | 0.9 |
| Other agriculture | 2.9 |

Source: Goldin, Knudsen, and Van der Mensbrugghe (1993)

TABLE 4 - NOMINAL PROTECTION COEFFICIENTS (NPCS) FOR MAJOR CROPS IN SELECTED ARAB COUNTRIES[1]

| Country | 1986-1989 | 1990 | 1991 | 1992 |
|---|---|---|---|---|
| Algeria | | | | |
| Durum wheat | 2.04 | | 3.11 | 2.52 |
| Bread wheat | 2.41 | | 2.89 | 2.44 |
| Barley | 2.36 | | 1.23 | 1.23 |
| Egypt[2] | | | | |
| Wheat | 0.83 | 1.13 | 1.11 | 0.83 |
| Barley | 1.41 | 1.05 | 0.95 | 1.16 |
| Sugar beet | 1.39 | 1.91 | 2.20 | 2.53 |
| Rice | 0.53 | 0.38 | 0.38 | 0.39 |
| Jordan | | | | |
| Bread wheat | 2.19 | 1.22 | 1.28 | 1.15 |
| Barley | 1.70 | 1.00 | 1.16 | 1.20 |
| Morocco | | | | |
| Durum wheat | 1.13 | 1.00 | 1.00 | 1.00 |
| Bread wheat | 1.43 | 1.60 | 1.70 | 1.59 |
| Barley | 1.56 | 1.00 | 1.00 | 1.00 |
| Maize | 1.64 | 1.00 | 1.00 | 1.00 |
| Saudi Arabia | | | | |
| Wheat | 3.24 | 2.99 | 3.17 | 2.71 |
| Syrian Arab Republic | | | | |
| Durum wheat | 0.45 | 1.58 | 1.49 | 1.38 |
| Bread wheat | 0.46 | 1.27 | 1.39 | 1.20 |
| Barley | 0.55 | 1.27 | 1.18 | 1.36 |
| Sugar beet | 0.06 | 0.13 | 0.24 | 0.24 |
| Tunisia | | | | |
| Durum wheat | 1.20 | 1.58 | 1.70 | 1.61 |
| Bread wheat | 1.27 | 1.46 | 1.42 | 1.39 |
| Barley | 0.96 | 1.16 | 1.27 | 1.26 |
| PSE by crop (in percent) | | | | |
| Corn | 52.75 | 46 | 48 | 36 |
| Cotton | -178.5 | -293 | -303 | -175 |
| Rice | -92 | -15 | 11 | -15 |
| Sugar | -119.75 | -11 | -12 | 17 |
| Wheat | 28.25 | 21 | 35 | 31 |

Sources: U.S. Department of Agriculture; and World Bank

[1]NPC = Domestic price/world price.

[2]NPC and PSE (producer subsidy equivalent).

170

**TABLE 5 - SELF-SUFFICIENCY RATIOS FOR SELECTED ARAB COUNTRIES, 1992**

| Country | Grains | Wheat | Corn | Barley | Rice | Vegetable Meals | Sugar | Beef, Veal, and Buffalo | Lamb, Mutton and Goat | Poultry |
|---|---|---|---|---|---|---|---|---|---|---|
| Algeria | 37.5 | 31.1 | 0.2 | 80.60 | 2.4 | 0 | 1.1 | 88 | 94.5 | 100 |
| Bahrain, Kuwait, Oman, Qatar, and United Arab Emirates | 0 | 0 | 0 | 0.00 | 0 | 100 | 0 | 14.6 | 45 | 13 |
| Egypt | 64.4 | 44.2 | 77.6 | 100.00 | 108.7 | 55.7 | 64.5 | 77.7 | 100 | 99.1 |
| Iraq | 69.2 | 63.6 | 100 | 100.00 | 9.5 | 0 | 2.3 | 100 | 100 | 98.8 |
| Jordan | 8.7 | 9.4 | 0.3 | 15.70 | 0 | 0 | 0 | 9.1 | 37.5 | 83.3 |
| Lebanon | 4.3 | 4.9 | 2 | 5.70 | 0 | 18.3 | 8 | 75 | 100 | 92.9 |
| Morocco | 35.4 | 27.8 | 38.2 | 53.50 | 85.7 | 97.9 | 56.1 | 96.6 | 100 | 100 |
| Saudi Arabia | 49.5 | 248.5 | 0.4 | 6.70 | 0 | 0 | 0 | 37.3 | 87.7 | 55.5 |
| Syrian Arab Rep. | 88.2 | 90.3 | 74.4 | 100.00 | 0 | 60.7 | 21.8 | 100 | 99 | 100 |
| Tunisia | 68.7 | 76 | 0.4 | 71.30 | 0 | 0 | 17.4 | 74.4 | 100 | 100 |
| Yemen | 33.7 | 6.5 | 25 | 100.00 | 0 | 100 | 0 | 90.6 | 97.5 | 84.9 |

Source: U.S. Department of Agriculture (1993).

**APPENDIX - AGRICULTURAL TRADE VALUES FOR ARAB COUNTRIES, AVERAGES 1986-89 AND 1990-92**
*(TOTAL AND MAJOR COMMODITIES, IN TEN THOUSANDS OF U.S. DOLLARS)*

| Country | Exports | | Imports | |
|---|---|---|---|---|
| | 1986-89 | 1990-92 | 1986-89 | 1990-92 |
| **Algeria** | | | | |
| Total | 3,055 | 5,204 | 238,787 | 228,553 |
|   Meat and meat preparations | | 2.427 | 2,190 | 13 |
|   Cereals and preparations | 11 | 55 | 78,966 | 50,484 |
|     Wheat and flour | | 77 | 57,366 | 53,780 |
|     Rice | | | 944 | 809 |
|     Barley | | | 4,282 | 2,418 |
|     Maize | | | 13,301 | 1,242 |
|   Pulses | | | 6,246 | 6,344 |
|   Fruit and vegetables | 995 | 2,700 | 15,717 | 15,867 |
|   Sugar | | | 22,408 | 31,048 |
| **Egypt** | | | | |
| Total | 59,705 | 40,641 | 315,260 | 276,571 |
|   Meat and meat preparations | 86 | 874 | 29,403 | 17,586 |
|   Cereals and preparations | 2,236 | 4,508 | 163,359 | 108,033 |
|     Wheat and flour | 10 | 2 | 142,830 | 86,776 |
|     Rice | 2,033 | 3,807 | 428 | 71 |
|     Barley | 30 | 40 | 365 | 156 |
|     Maize | 226 | 40 | 19,350 | 20,026 |
|   Pulses | 1,369 | 290 | 3,476 | 8,403 |
|   Fruit and vegetables | 14,477 | 15,050 | 8,858 | 11,718 |
|   Sugar | 277 | 161 | 30,017 | 23,415 |
| **Jordan** | | | | |
| Total | 11,429 | 16,631 | 54,975 | 73,949 |
|   Meat and meat preparations | 45 | 172 | 7,602 | 7,702 |
|   Cereals and preparations | 798 | 586 | 14,635 | 24,472 |
|     Wheat and flour | 553 | 317 | 5,732 | 9,425 |
|     Rice | 185 | 27 | 2,297 | 3,747 |
|     Barley | | | 1,583 | 3,137 |
|     Maize | | 11 | 3,410 | 6,158 |
|   Pulses | 20 | 80 | 852 | 1,282 |
|   Fruit and vegetables | 5,910 | 7,684 | 8,138 | 6,571 |
|   Sugar | | 47 | 2,389 | 6,376 |
| **Kuwait** | | | | |
| Total | 6,615 | 1,430 | 109,017 | 57,463 |
|   Meat and meat preparations | 1,387 | 589 | 9,810 | 6,029 |
|   Cereals and preparations | 1,046 | 108 | 14,071 | 10,164 |
|     Wheat and flour | 85 | | 2,254 | 1,810 |
|     Rice | 127 | | 6,545 | 5,233 |
|     Barley | | | 1,907 | 943 |
|     Maize | | | 1,049 | 460 |
|   Pulses | 20 | 5 | 614 | 373 |
|   Fruit and vegetables | 817 | 230 | 28,906 | 11,759 |
|   Sugar | | | 1,745 | 1,847 |
| **Morocco** | | | | |
| Total | 50,166 | 63,255 | 72,878 | 93,148 |
|   Meat and meat preparations | 6 | 669 | 876 | |
|   Cereals and preparations | 733 | 180 | 21,348 | 28,558 |
|     Wheat and flour | 121 | 23 | 18,596 | 22,210 |
|     Rice | - | 1 | 144 | 805 |
|     Barley | 731 | 105 | 52 | 2,005 |
|     Maize | 4 | | 1,784 | 2,497 |
|   Pulses | 1,497 | 1,009 | 82 | 221 |
|   Fruit and vegetables | 41,402 | 50,890 | 1,311 | 2,330 |
|   Sugar | 20 | 2 | 5,942 | 8,132 |

172

**APPENDIX** *(CONTINUED)*

| Country | Exports | | Imports | |
|---|---|---|---|---|
| | 1986-89 | 1990-92 | 1986-89 | 1990-92 |
| **Oman** | | | | |
| Total | 4,668 | 7,172 | 40,358 | 53,510 |
|     Meat and Meat preparations | 97 | 180 | 5,517 | 5,570 |
|     Cereals and preparations | 839 | 949 | 7,599 | 9,723 |
|         Wheat and flour | 86 | 479 | 1,802 | 2,259 |
|         Rice | 54 | 68 | 3,831 | 4,737 |
|         Barley | 25 | 10 | 423 | 764 |
|         Maize | 14 | 10 | 195 | 546 |
|     Pulses | 4 | 2 | 261 | 381 |
|     Fruit and vegetables | 1,064 | 996 | 9,084 | 11,170 |
|     Sugar | 32 | 2 | 789 | 1,228 |
| **Saudi Arabia** | | | | |
| Total | 32,833 | 45,093 | 361,240 | 425,977 |
|     Meat and meat preparations | 810 | 1,577 | 32,450 | 48,503 |
|     Cereals and preparations | 17,210 | 17,137 | 100,028 | 102,967 |
|         Wheat and flour | 16,609 | 15,499 | 4,669 | 6,566 |
|         Rice | 80 | 275 | 17,909 | 20,654 |
|         Barley | 80 | | 58,650 | 50,933 |
|         Maize | 2 | 4 | 5,821 | 8,535 |
|     Pulses | 26 | 27 | 1,937 | 1,909 |
|     Fruit and vegetables | 4,453 | 6,990 | 51,093 | 59,843 |
|     Sugar | 116 | 47 | 5,326 | 3,694 |
| **Somalia** | | | | |
| Total | 8,610 | 3,761 | 11,595 | 8,981 |
|     Meat and meat preparations | 5,285 | 3,550 | | |
|     Cereals and preparations | | | 6,170 | 6,553 |
|         Wheat and flour | | | 3,003 | 2,750 |
|         Rice | | | 2,137 | 2,983 |
|         Barley | | | | |
|         Maize | | | 520 | 245 |
|     Pulses | | | 215 | 337 |
|     Fruit and vegetables | 2,188 | 1,107 | 378 | 364 |
|     Sugar | | | 1,078 | 533 |
| **Sudan** | | | | |
| Total | 50,552 | 43,259 | 26,936 | 26,072 |
|     Meat and meat preparations | | 25 | 6 | 1,587 |
|     Cereals and preparations | 4,645 | 2,200 | 10,825 | |
|         Wheat and flour | | | 9,800 | 9,267 |
|         Rice | | | 1,313 | 1,350 |
|         Barley | | | | |
|         Maize | | | 233 | 263 |
|     Pulses | | 183 | 1,058 | 1,900 |
|     Fruit and vegetables | 2,347 | 2,343 | 1,440 | 2,195 |
|     Sugar | | | 666 | 530 |
| **Syrian Arab Republic** | | | | |
| Total | 26,183 | 68,184 | 47,788 | 73,393 |
|     Meat and meat preparations | 7 | 72 | 1,455 | 184 |
|     Cereals and preparations | 1,981 | 1,728 | 17,595 | 29,795 |
|         Wheat and flour | 72 | 226 | 12,807 | 19,179 |
|         Rice | | | 2,409 | 4,506 |
|         Barley | 2,122 | 124 | 126 | 1,629 |
|         Maize | | | 2,099 | 4,313 |
|     Pulses | 1,594 | 1,953 | 32 | 58 |
|     Fruit and vegetables | 5,962 | 21,592 | 1,699 | 1,866 |
|     Sugar | | | 7,553 | 12,916 |

**APPENDIX** *(CONCLUDED)*

| Country | Exports | | Imports | |
|---|---|---|---|---|
| | 1986-89 | 1990-92 | 1986-89 | 1990-92 |
| **Tunisia** | | | | |
| Total | 18,932 | 36,564 | 55,821 | 56,829 |
|    Meat and meat preparation | 31 | 39 | 1,934 | 2,363 |
|    Cereals and preparations | 845 | 2,083 | 21,945 | 15,875 |
|      Wheat and flour | | | 15,833 | 10,071 |
|      Rice | | 3 | 213 | 345 |
|      Barley | | 311 | 3,020 | 686 |
|      Maize | | | 2,901 | 3,872 |
|    Pulses | 34 | 62 | 301 | 207 |
|    Fruit and vegetables | 6,895 | 8,286 | 1,719 | 1,649 |
|    Sugar | 52 | | 3,900 | 6,280 |
| **United Arab Emirates** | | | | |
| Total | 35,446 | 50,490 | 139,148 | 177,188 |
|    Meat and meat preparations | 2,330 | 15,037 | 18,094 | |
|    Cereals and preparations | 6,232 | 8,427 | 18,823 | 23,388 |
|      Wheat and flour | 453 | 148 | 2,255 | 1,433 |
|      Rice | 4,015 | 6,937 | 9,931 | 13,470 |
|      Barley | 94 | 163 | 1,057 | 508 |
|      Maize | 3 | 68 | 738 | 598 |
|    Pulses | 301 | 549 | 928 | 1,662 |
|    Fruit and vegetables | 12,813 | 16,574 | 43,507 | 47,819 |
|    Sugar | 850 | 6,514 | 2,681 | 10,318 |
| **Yemen** | | | | |
| Total | 4,658 | 5,503 | 61,323 | 80,200 |
|    Meat and meat preparations | | | 2,621 | 2,731 |
|    Cereals and preparations | 342 | | 19,539 | 27,682 |
|      Wheat and flour | | | 15,246 | 21,215 |
|      Rice | | | 3,806 | 4,348 |
|      Barley | 1,917 | | 22 | 1 |
|      Maize | | | 212 | 2,111 |
|    Pulses | 36 | | 655 | 610 |
|    Fruit and vegetables | 5,815 | | 1,340 | |
|    Sugar | | | 6,624 | 13,533 |

Sources: FAO (various years)