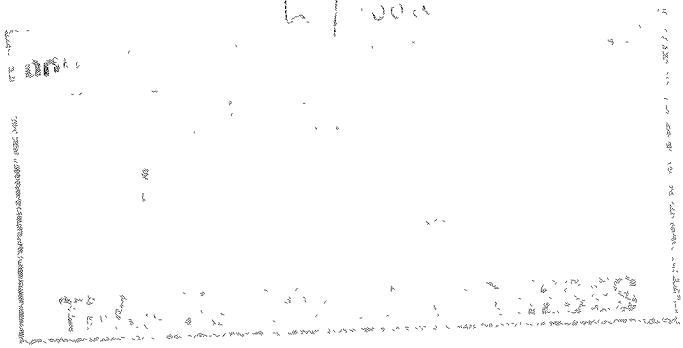
WORKING PAPER 27

EUROPEAN COMMUNITY TRADE BARRIERS TO TROPICAL AGRICULTURAL PRODUCTS

by

MICHAEL DAVENPORT



November 1988

ISBN 0 85003 117 6

OVERSEAS DEVELOPMENT INSTITUTE
Regent's College
Inner Circle, Regent's Park
LONDON, NW1 4NS

ACKNOWLEDGEMENTS

This paper was written with support from the Overseas Development Administration under Research Scheme R4414 (ref. ESC 890/312/001A), in co-operation with the Overseas Development Institute (Study 235). Although the ODA provided finance for the research the views expressed are those of the author and do not necessarily represent the views either of the ODA or of the ODI.

I would like to acknowledge major support and assistance in writing this report from:
Emmanuel Boullez, Joly Dixon, Yvan van Eesbeek, Lorimer Mackenzie, Giampiero Schiratti, Frank Schoenborn and Alexander Tilgenkamp of the Commission of the European Communities, Evan Rogerson and Tamotsu Takase of the GATT Secretariat, Alfred Friedeberg (Rotterdam), David Babb, Jeremy Bestin, Conrad Caspari and Brian Rutherford (London), and, in particular, Adrian Hewitt, John Howell, Tony Killick, Sheila Page, Chris Stevens and the staff of the ODI in London, as well as the Overseas Development Administration who provided the funds that made it possible. The views and errors of commission and omission are all mine.

CONTENTS

LIST OF TABLES

GLOSSARY

ACP: African, Caribbean and Pacific states, associated with the Community under the Lomé Conventions
BLEU: Belgo-Luxembourg Economic Union
CAP: Common Agricultural Policy
CCP: Commodity Credit Programme (of the USDA)
ECU: European Currency Unit
EEP: Export Enhancement Programme (of the USDA)
GSP: Generalised System of Preferences
IMF: International Monetary Fund
MFN: "Most favoured nation", based on the GATT under which the most favourable tariff treatment must be extended to all countries. The GSP and ACP arrangements are exceptions to this principle
UNCTAD: United Nations Conference on Trade and Development
USDA: United States Department of Agriculture

General note: As of 20 September 1988

1 ecu:	0.6616 (central rate, London)
1 ecu:	$US 1.1113 (central rate, New York)
$US 1:	0.5936 (central rate, London)

EXECUTIVE SUMMARY

This paper looks at the quantitative implications of a number of plausible trade liberalisation moves that could be taken by the European Community affecting tropical products. The commodities under consideration are cocoa, coffee, tobacco, rice, cassava (manioc) and the principal tropical oils, palmoil, palm nut oil and coconut oil.

The paper does not evaluate policy adjustments that would imply major changes in the Common Agricultural Policy. Indeed one of the objects of the exercise has been to determine whether there are possible adjustments to the trade regimes for certain sensitive products like tobacco, rice, cassava and vegetable oils,that would be of benefit to the producing countries as well as to the consumers in the Community, but which would not mean significant increases in the CAP budget.

The Community has made its "offer" to the tropical products group within the Uruguay Round negotiations, an offer that is disappointing to the developing countries and European consumers in that all products subject to, or even those competitive with products subject to, CAP regimes are excluded. If the Community has its way the chances of significant liberalisation in these sectors will be delayed till the substantive issues of agriculture get debated towards the end of the round. More importantly the chances for substantive liberalisation will be reduced because the weight of the countries exporting these commodities will be weak relative to those exporting temperate agricultural products. Secondly the attention given to the products of greatest interest to the third world will likely be more limited than in the tropical products negotiations which are still due to be resolved in December of this year.

In this study a considerable number of options for liberalisation are analysed and found to be feasible. Clearly action undertaken jointly by the developed countries would be ideal from the developing countries point of view. If joint action over some products is not found acceptable to all, or even any other of the developed countries, then the Community should take action unilaterally.

It is constantly demonstrated in this paper that not only would the developing countries, including in several cases, the Community's associated African, Caribbean and Pacific (ACP) states, benefit from a reduction of the barriers to the imports of their products but consumers in the Community would also enjoy important gains through cheaper foodstuffs. Where the ACP countries are shown to lose out from the policy change, their loss is so small compared with the gains to the Community and the other developing countries, that it would be clearly desirable to go ahead with the liberalisation and compensate the ACP countries directly.

In almost all cases the net gains to the Community producers and consumers taken together are substantial. The statement in the Community proposal to the tropical product negotiations that freer trade and cheaper imports is a "burden", which has to be shared by the developed countries is shown quantitatively to be the Mercantilist nonsense that common sense suggests.

Table 1

Background statistics on tropical products in study; Community imports, tariff rates and CAP intervention costs in related sectors, average 1985/86, ecu mill. and percent

	Community imports			Tariff rates(a)			CAP regime
	total	GSP	ACP	MFN	GSP	ACP	cost (b)
Cocoa beans	1736.5	284.6	1434.5	3.	3.	0.	n.a.
Coffee beans	5787.5	3332.8	2438.7	5.	4.5	0.	n.a.
Tobacco (c)	1502.5	552.5	258.5	5.7d	5.7d	0.	822.6
Rice	324.7	136.8	48.3	286.4e	e	140.f	71.9
Cassava	901.2	899.8	1.4	6.	6.	6.	2850.7g
Palmoil	686.3	573.0	113.0	6.	4.	0.	1569.1h
Palm kernel oil	292.8	255.6	37.2	10.	7.	0.	h
Coconut oil	429.7	384.5	45.2	10.	7.	0.	h

Note a: Rates are based on the most significant tariff line; see Appendix 2 for more detail
b: total EAGGF guarantee expenditure
c: better quality varieties, i.e. Nimexe codes 2401.02 to 2401.49. All tobacco imports averaged 1829.2 mill. ecu
d: specific tariffs as percent average import value
e: OECD estimate of producer subsidy equivalent, principally the variable levy. For GSP suppliers and MFN suppliers it is the same.
f: for ACP suppliers the levy is reduced. Author's estimate of average PSE. See Chapter 6 for more details
g: the EAGGF intervention cost of the cereals sector
h: the EAGGF intervention cost of the oilseed sector.

Table 1 gives some summary information about the products analysed in this paper. They are all significant components of trade between the Community and the developing world. The total value of Community imports involved (taking 1985-86 averages throughout) is 11.6 billion ecu, which compares with a total import bill for agricultural goods of 47 billion ecu. Total developing country exports (excluding the major oil producers) came to 364 billion ecu in 1985 (the 1986 figure is not yet available). We cover nearly 11 billion ecu of their average 1985-86 exports.

In the text the countries that would benefit in particular from the removal of Community trade barriers in the individual goods are identified. Here it is worth pointing out that the Community accounts for 52 percent of world imports of cocoa beans and 45 percent of coffee beans. In rice and tobacco the figures are 19 and 43 percent. The Community is the only significant importer of cassava and takes 26 percent of world exports of tropical vegetable oils.

In many cases the Community takes a much higher proportion of ACP exports, 84 percent of cocoa beans, 64 percent of coffee beans, 52

percent of tobacco, 49 percent of rice and virtually all of tropical oils.[1]

The tariff rates shown in the table are generally low or moderate. With the exception of rice, the products under investigation are not subject to typical CAP regimes, though intervention buying does take place in tobacco and oilseeds. In the case of both the latter, the relatively low level of import barriers for goods, in which the Community has a CAP regime, is due to the fact that these tariffs are "bound" under GATT.

The last column of Table 1 gives the CAP intervention costs of the commodity itself or those of the sector threatened by third world imports. In all cases, except arguably for rice, they are substantial and it is not difficult to understand why agricultural ministers might react unfavourably to trade liberalisation ideas which threaten to amplify these expenditures. As will be seen the CAP costs of implementing the proposals outlined in this paper are generally minor. In the one case where the costs appear significant, it is argued that the policy change should be brought in gradually.

Cocoa: The tariff on cocoa beans is only 3 percent but provides a small margin of preference for the ACP exporters, principally the Cote d'Ivoire. Eliminating this tariff would benefit the non-ACP exporters, in particular Brazil and Malaysia. The ACP exporters would suffer a slight loss of market share in the Community, largely made up by a rise in world prices of 2.6 percent.

As the Commission document to the tropical products group implicitly acknowledges, a much more significant source of gain for the producing countries, whether ACP or not, would be the elimination of the high excise taxes that exist in certain Community states. If the average rate of tax, including both VAT and excise taxes, on cocoa products in the Community of 10 percent were replaced by a uniform tax of 5 percent, the exporting countries would experience a welfare gain (and increase in foreign exchange earnings) of over 30 million ecu on their trade with the Community, and a further 22 million on their trade with non-Community importers. The welfare gains to Community consumers would amount to 46 million ecu, after netting out the loss in tax revenues.

It is true that these amounts are small relative to the fluctuations in earnings that producing countries have undergone in recent years due to the volatility of cocoa prices. However this would be a poor justification for inaction. A more liberal import regime is not inconsistent with action on the part of producing and consuming countries to reduce price instability.

---

[1] These figures are based on combining UNCTAD and Eurostat data and refer to 1985 and are subject to reservation. As so often happens, there are apparent inconsistencies between the data sources, so that the total value of Community imports from the ACP exceeds total ACP exports to the world in the case of palm oil. The inconsistencies may only be the result of using annual averages to make the necessary FOB-CIF and exchange rate adjustments, but one suspects deeper problems of data comparability.

Coffee: A similar analysis was done for coffee, where the GSP suppliers are now subject to a 4.5 percent tariff. Again the effects of eliminating this tariff are small in absolute terms, but the justification for the tariff, a preference for the ACP countries, is shown to be false. The ACP countries would gain almost as much from the rise in world prices following the elimination of the Community tariff as they would lose on the Community market. The difference could readily be made up through direct aid flows.

The effects of eliminating excise taxes is considerable. These are over 40 percent in Germany and over 9 in Italy, another major consumer. Consumer gains, net of excise revenue losses, would amount to over 530 million ecu in the Community, obviously concentrated on the high tax countries. The producing countries would gain 300 million on trade with the Community and a further 350 million ecu as a result of the 5 percent rise in the world coffee price. The main beneficiaries would be Colombia, Brazil and the Ivory Coast.

Tobacco: Tariffs on unmanufactured tobacco from non-ACP countries are still substantial, primarily in this case to give protection to Community tobacco farmers. Average rates on GSP imports were about 7.5 percent in 1985 and 1986. On ACP tobacco duty is not charged. Eliminating the tariff on GSP imports would benefit these countries by 25 million ecu. The small cost to the ACP states from losing their preference margin is more than made up by a rise in the world price of 4 1/2 percent.

Another more radical reform is also investigated. Estimates of the effects of the totally elimination of intervention buying, processing premia and subsidisation of exports of tobacco in the Community show that the prices of the higher quality tobaccos are barely changed. The prices of the less-favoured Oriental varieties which the Community has to subsidise to sell on the world market will rise as Community farmers switch to the higher value varieties or out of tobacco altogether. Community exports of tobacco fall to zero while imports rise 2.5 percent, benefiting the tobacco-producing countries. The savings on the CAP budget would have been over 820 million ecu in 1985/86 and would be more today.

Rice: This commodity is subject to the archetypal CAP regime of unlimited guaranteed intervention, export subsidies and a premium to encourage farmers to shift from varieties for which there is no demand in the Community to varieties which the Community could import much more cheaply from abroad. Two simulations are reported, the first involving the abolition of the levies on long-grained rice across the board and the second abolishing them only for the GSP and ACP countries. The latter simulation is consistent with the FAO Intergovernmental Group on Rice recommendation that, inter alia, "developed countries should make all efforts to implement, improve and enlarge GSP schemes for rice", and thus should not be seen as an aggressive trade action.

In the latter, the price of paddy rice in the Community is estimated to fall 14 percent, imports from the GSP suppliers to rise by over 200 percent and to fall to zero for MFN suppliers (mainly the United States). The ACP states make a small gain. If MFN tariffs were also abolished, imports from the MFN countries would rise at the expense of the ACP states.

The gains to the Community consumers in either case are substantial. The losses to farmers in the Community are very small, since only 15 percent of Community rice production is of the long-grained (Indica) varieties. A tariff-reduction policy would appear to be much more rational than the present combination of an expensive intervention regime with subsidies to encourage conversion into what is likely to become another expensive intervention regime.

Cassava: This product is imported as a cereal substitute to the extent that "voluntary export restraints" imposed on Thailand and the other producing countries allow. At present the producing countries are able to expropriate a large "economic rent" by pricing cassava just low enough to sell their quotas, that is at 1 1/2 to 2 times the price it would otherwise command.

Simulations of the effects of eliminating the quotas altogether show significant gains to the exporting countries despite the loss of the rent. Imports by the Community are estimated to rise by about 90 percent and additional intervention costs, assuming no change in the revenues of Community cereal farmers is allowed, would come to just over 400 million ecu. This does not take account of the gains to the livestock farmers in the form of cheaper feed. Of course the CAP budgetary cost could be spread over a number of years by gradually liberalising the quotas as cereal intervention is increasingly limited by guarantee thresholds.

Vegetable oils: Tropical vegetable oils to some extent compete with the oils produced from temperate oilseeds grown in the Community, mainly rape, sunflower and, increasingly soybean. GSP tariffs on palmoil, palm kernel oil and coconut oil average from 8 to 10 percent. Simulations of the effects of eliminating the GSP tariffs on tropical oils show that some substitution by consumers in the Community towards these oils from the temperate seed oils would take place. Community prices of all oils would fall with those for tropical oils falling 6 to 8 percent. Community consumption of tropical oils would rise from 2 1/2 to 3 percent, but the ACP exporters (some of whom have been aggressively investing in oil palm plantations) would suffer in terms of their share of the Community market.

However the ACP losses on the Community market would imply welfare costs of only about one quarter of the gains the policy change would bring to the Community consumer. In these cases the use of tariff preferences to subsidise particular countries is clearly a sub-optimal policy. The gains to the Community consumer stemming from lower prices for all oils, net of the loss of incomes to Community oilseed farmers, would amount to about 130 million ecu, while the loss of tariff revenues would come to 62 million ecu.

A further exercise was done to determine the effects of the proposed oils and fats tax (or "stabilisation scheme"), which despite the efforts of the British and some other member states at the 1987 Copenhagen summit to kill it, appears to be only dormant. It is shown that such a tax would be extremely burdensome to producers outside the Community, both ACP and GSP, and consumers inside. Rises in Community prices of vegetable oils, on plausible assumptions about the level of the tax, would range from 40

to nearly 60 percent, the highest percentage increases applying to tropical oils.

Community imports of tropical oils would fall by 13 percent for palmoil and 9 percent for the lauric acid oils. Both the ACP and the GSP suppliers would lose by over 100 million ecu. The loss to Community consumers would amount to a steep 1700 million ecu.

Processed products: It is often argued that a major constraint on the growth of a manufacturing sector in the third world is tariff escalation by the developed countries which discriminates against processed products. While the paper concentrates on tropical product exports in their crude form, some calculations are included which show the reductions in tariffs on processed products that may be required if escalation is not to increase. Where GSP tariffs on certain unprocessed commodity, cocoa beans, coffee and tobacco for example, are eliminated, a 25 percent reduction in tariffs on the processed commodity is barely enough to bring about a reduction in effective protection. If tariff reductions are not to increase the bias against processed commodities, tariff cuts on processed goods may have to be a significant multiple of the cuts on the unprocessed goods. Otherwise there is a danger that the Uruguay Round will increase effective protection as it seems the Tokyo Round did in many cases.

In Table 2 an attempt is made to summarise the results of the study. There are problems of comparability but this table does present a very rough picture of the relative gains (or losses) of implementing the different liberalising policies discussed in the body of the paper. But the numbers should only be interpreted in terms of the details of the simulations discussed in the individual chapters.

Table 2

Summary of effects of trade liberalisation initiatives discussed in this paper; world price and trade effects (percent change) and welfare impact (mill. ecu)

policy	world price	EC impts	GSP expts	ACP expts	Welfare changes EC	GSP	ACP
Cocoa beans							
GSP zero rated	2.6	0.2	-0.2	2.1	-3.4	37.6	-2.1
Cons. taxes 5%	1.8	1.4	1.4	1.4	46.0	25.7	27.2
Coffee beans							
GSP zero rated	2.5	0.6	1.6	-0.8	36.8	224.3	-14.4
Zero EC excise	5.1	2.9	3.3	2.4	536.5	465.5	188.8
Tobacco							
GSP zero rated	4.5	0.4	1.8	-0.4	-14.9	55.9	7.2
Regime scrapped							
better quality	0.2	0.9	0.9	0.9	0.	n.a.	n.a
lower quality	22.0	7.7 a	7.7 a	7.7 a	32.6	n.a.	n.a
Rice (long grain):							
zero levies on							
GSP/ACP imports	0. b	6.9	48.3	-10.3	3.3	76.5	6.6
any imports	0. b	19.8	0.0	-7.9	14.5	0.	-8.4
Cassava (central estimate):							
No barriers	110.6	91.9	91.9	91.9	294.5	488.9	0.8
Tropical oils							
GSP zero rated							
palmoil	1.2	2.5	3.3	-18.9	56.5	66.8	-15.6
lauric oils	1.2	2.9	3.4	-23.9	c	c	c
p.m. Oils and fats tax							
palmoil	-2.7	-12.7	-12.7	-12.7	-32.2	-21.7	-5.5
lauric oils	-1.8	-9.0	-9.0	-9.0	c	c	c

Note a: fall in net exports by the Community
b: by assumption; see text
c: total welfare effects from eliminating GSP tariffs or imposing a tax for all vegetable oils given under palmoil heading.

CHAPTER 1

INTRODUCTION

In recent years the United States and the European Community have, largely for budgetary reasons, made limited moves to reduce the level of protection they afford their agricultural sectors. Other countries, in particular Australia and New Zealand, have undertaken much more radical liberalisation. The whole question of the liberalisation of agricultural trade is now under debate within the context of the Uruguay Round of trade negotiations. At present there is a wide gulf between the radical proposals of the United States for the progressive elimination of all subsidies within a time scale of ten years, and the much more modest proposals of the European Community. Nevertheless some measure of agreement by the industrial countries to "reduce disharmonies" in agricultural policy is likely and this almost certainly means significant reductions in subsidies to farmers in the developed countries. Among the important tropical agricultural commodities that are likely to be affected by generalised reductions in protection in the developed countries are sugar, tobacco, rice and oilseeds.

However it is likely to be some years before the fruit of such a liberalisation is evidenced in increased prices on the world market and increased imports of agricultural commodities from the Third World, and even then the degree of liberalisation is in doubt. In the meantime trade skirmishes between the developed economies can have unfortunate effects for producers in the developing countries, as for example the use of the U.S. Export Enhancement Programme to release substantial quantities of soybeans on the world market, thus depressing the prices of oilseeds in general.

In the developed countries, growth in output of substitutes to imports from the third world will continue to be encouraged by subsidies to farmers. Of course, close substitutes are not available for tropical beverages and fruits, but cane sugar, tobacco, rice and oilseed producers in the developing countries will suffer from the protection of farmers of these or alternative products in the developed countries.

Tropical products, however, retain a special status in the Uruguay Round of multilateral tariff negotiations. Indeed ever since the early 1960s, tropical products have been accorded special treatment. In the current round, only a few classes of goods are singled out as separate subjects for negotiation. These are natural resource-based products, textiles and clothing, agricultural products and tropical products. As regards the last of these, the Punta del Este Ministerial Declaration affirms that

> negotiations shall aim at the fullest liberalization of trade in tropical products, including in their processed and semi-processed forms and shall cover both tariff and all non-tariff measures affecting trade in these products.
>
> Contracting Parties recognize the importance of trade in tropical products

> to a large number of less-developed contracting parties and agree that negotiations in this area shall receive special attention, including the timing of the negotiations and the implementation of the results as provided in B(ii). (quoted in Annex 3, Finger and Olechowski, 1987)

Paragraph B(ii) says that agreements reached before the Round is completed may be implemented on a provisional or on a definitive basis, but they "shall be taken into account in assessing the overall balance of the negotiations".

As early as 1962 in response to GATT pressure, the United States Congress authorised non-reciprocal removal of duties on tropical products, but only under the condition that other developed countries did likewise. The Community refused on the grounds that ACP preference would be threatened, though did not appear to object to the element of non-reciprocity in the United States proposal. The GATT trade ministers agreed a similar liberalisation the following year, but again the Community dissented though not on the issue of reciprocity (Hudec, 1987, 45).

During the Tokyo Round, in the negotiating group on tropical products, the developing countries submitted requests for MFN concessions and GSP contributions from the developed countries. Of a total of 2,220 requests covering agricultural products, concessions and contributions were granted on 1,180 items. As regards non-tariff barriers (NTBs), concessions were granted on only 18 items out of the 128 agricultural items covered by the requests (FAO, 1983, 12).

In the context of the Uruguay Round negotiations, the United States has proposed the elimination of all support and protective measures on a priority list (to be agreed in the negotiations) of tropical products on an expedited basis, i.e. a period shorter than the ten-year period envisaged in the United States broad proposal on agriculture trade. Though there have been some offers for the extension of preferences under GSP arrangements, notably by Austria and Hungary, only the European Community has submitted a more detailed proposal for eliminating tariff and non-tariff barriers on tropical products.

The Community Proposal on Tropical Products

From the developing countries' viewpoint, the most disappointing feature of the Community proposal - a more neutral term than the Commission's "offer" which is loaded with mercantilist overtones - is its limited product coverage. Among the major unprocessed products listed, only tropical beverages face significant trade barriers, though the elimination of residual tariffs on such commodities as tropical woods, natural rubber, spices, essential oils, resins and tropical fruits and nuts, small though they are, will be welcome to certain countries.

The proposal suggests the elimination of tariffs on tropical industrial products and beverages, but the elimination or reduction of tariffs for fresh or semi-processed tropical agricultural products. Tariff rates for goods such as fresh fruits ,tinned fruits and fruit juices are still in many cases very high - as high as 40 percent on several items, and

frequently over 20 percent - and there is still concern about competition for substitutes produced within the Community.

For semi-processed industrial goods, the elimination or reduction of tariffs is proposed, and for processed goods, the document speaks of a 50 percent reduction. Manufactured tobacco is specifically included. Here duties are currently as high as 90 percent for cigarettes and 117 percent for smoking tobacco, with only modest reductions for GSP suppliers.

Among other industrial goods specifically mentioned, tariffs are currently high for processed woods, particularly plywood, veneered panels and similar articles and, though under the Community GSP, there is tariff-free entry, these goods are subject to tariff quotas and ceilings. Natural rubber enters the Community tariff-free, while jute and hard fibres are currently mostly free of tariffs. Goods manufactured from these are generally tariff-free for GSP countries.

Of course even "generous" reductions of, say, 50 percent in tariffs on finished goods, while tariffs are cut or abolished on the unprocessed inputs, may leave effective protection rates even higher on the processed goods. This paper is primarily concerned with unprocessed goods, but in the Appendix some calculations are made as to plausible changes in effective protection on processed goods.

The Community proposal includes progressive elimination of national quantitative restrictions though bananas, the most important of commodities imported under national quotas other than sugar, is excluded. Sugar is nowhere mentioned and does not rate as a tropical product as far as the Community is concerned.

In fact the proposal excludes all cases where there is a Common Agricultural Policy regime in that or a closely related product, or where special arrangements to manage trade in the interests of particular exporting countries have been entered into. Where products are closely tied up with the Common Agricultural Policy (CAP), the Community argues, they should be treated in the global agricultural negotiations. Among this group, oilseeds and vegetable oils, tobacco, rice and cassava are identified. Pineapples and bananas are excluded because of the interests of particular exporting countries.

Apart from coverage the developing countries might well express some disquiet about the conditionality attached to these proposals. The earlier acceptance of non-reciprocity is, if not lacking, at least qualified.

The annex to the proposal states that the "concessions" are dependent on an "adequate degree of reciprocity on the part of the developing countries, where the level of development and financing and trade requirements are such as to enable them to participate more fully in the global balance of rights and obligations in the GATT system" (my translation). This clearly leaves room for many interpretations. It is interesting that only last year, Vincent Cable wrote that a major advantage of having separate negotiations on tropical products was that "other forums involving developing countries are likely to be dominated by the concerns of the major NICs and caught up in the arguments

Table 1.1

Exports of tropical products (a) as a percent of total merchandise exports, total merchandise exports (fob) and per caput income for countries where the share of tropical products is greater than 50 percent, average 1985/86

	Share of tropical pdts. in merch. exports, %	Total merch. exports, $ mill.	Income per caput, 1985$
Equatorial Guinea	100.0	20	n.a.
Uganda	91.6	199	n.a.
Burundi	90.9	104	230
Malawi	83.7	282	170
Madagascar	79.1	303	240
Panama	76.8	281	2100
Rwanda	75.6	87	280
Tanzania	75.0	331	290
Cote d'Ivoire	73.1	2818	660
El Salvador	72.0	643	820
Reunion	71.4	87	n.a.
Burma	69.3	312	190
Ghana	67.4	594	380
Cameroon	67.2	802	810
Cuba	65.1	7365	n.a.
Guadeloupe	62.6	80	n.a.
Ethiopia	62.4	375	110
Colombia	59.1	3517	1320
Central African Republic	58.7	87	260
Costa Rica	56.1	983	1320
Kenya	54.9	1020	290
Dominican Republic	53.2	809	790
Sri Lanka	52.3	1322	380
Martinique	50.2	125	n.a.
Least developed	24.7	7761	200

Note a: rice, bananas, sugar, coffee, cocoa and cocoa (exc. chocolate), tea, spices, groundnuts and groundnut oil, copra, coconut oil, palmnuts and kernels, palmnut and palm kernel oil, tobacco, natural rubber, non-coniferous timber, jute, sisal and abaca.

Sources: export data: UNCTAD, 1988; income data: World Bank, 1987.

surrounding graduation and reciprocity" (Cable, 1987). Clearly the Community is not about to let the reciprocity card remain un-played in the talks on tropical products.

Thirdly the old chestnut of "sharing the burden" of freer trade is raised. Here the demand for "a calculation of the balance of gains for all the industrialised countries, the state-trading countries and the most advanced [developing] countries" is both so insufficiently precise in concept and controversial in practice that it clearly leaves plenty of opportunity for creating difficulties right up to the last moment.

The Significance of Tropical Agricultural Products to the Developing Countries

"Almost 100 developing countries [who] are not newly industrialised countries (NICs), high income oil exporters, or major low-income countries (India and China) - all of which have some capacity to negotiate effectively in their own interest - are overwhelmingly commodity exporters, mainly of tropical goods" (Cable, 1987, 171). In fact of the 150 developing countries and territories (excluding major oil exporters) for which UNCTAD assembles trade data, only in 42 cases did primary commodities constitute more than 80 percent of merchandise exports in 1985 (or the latest available year) (UNCTAD, 1988). However these include a high proportion of very low income countries. Of course this calculation does not account for ex-ports of commodities processed in the producing country, but this would, sadly, make little difference.

For developing countries as a whole, the share of primary product exports in total merchandise exports in 1985 was 25.4 percent, for Africa it was 25.4 percent, for America 40.1 percent, for Asia 12.5 percent and for Oceania 66.8 percent. Using the U.N. grouping, the share in the least developed countries' exports was 80.6 percent.

Some compilations of the dependency of exports on tropical products are presented in Table 1.1, together with an indication of per caput incomes. The World Bank puts the per caput income of developing countries as a whole at $US 600, so that 11 out of the 18 countries for which income data are available have incomes below that average. The countries without income figures can in most cases be assumed to be in the very low income group.

Table 1.2 gives dependency ratios for some specific tropical products. The extent to which certain countries, often among the least developed, depend on a monoculture is well-known. This table merely recalls the high degree of export dependency of certain countries on a number of tropical products, some of which are the subject of this paper.

The very high ratios for the tropical beverages group may even understate the risk for the output of most of these countries is diversified between the different beverages and these are liable to suffer the same weather risks. Such diversification does not necessarily protect the country concerned from a disastrous and unpredictable fall in exports. Dependency ratios are also high for a number of tropical goods not listed in the table. The most important of these are spices in Madagascar (30.0 percent) and Tanzania (15.7 percent), tobacco in Malawi (55.2 percent),

natural rubber in Liberia (19.0 percent) and jute in Bangladesh (14.2 percent).

Table 1.2

Dependency ratios (ratios of exports of specific products to total exports) in excess of 10 percent for rice, bananas, sugar, non-coniferous timber and tropical beverages, average 1985/86, percent

Rice		Bananas		Sugar	
Burma	34.7	Guadeloupe	50.6	Reunion	69.4
Thailand	13.3	Martinique	50.0	Cuba	64.2
Surinam	12.3	St. Vincent and		Swaziland	37.5
Pakistan	12.0	Grenadines	39.7	Guyana	31.2
		Panama	27.2	Dominican	
		Costa Rica	23.4	Republic	28.9
		Somalia	20.6	Guadeloupe	11.6
		Grenada	16.2	Panama	10.8

Non-coniferous timber		Cocoa		Coffee	
Panama	31.7	Equatorial		Uganda	95.7
Equatorial		Guinea	80.8	Burundi	85.2
Guinea	31.0	Ghana	57.0	Rwanda	68.0
Burundi	30.8	Cote d'Iv.	32.0	El Salvador	66.6
Central Afr.		Grenada	22.8	Ethiopia	63.0
Republic	23.8	Cameroon	22.0	Colombia	50.4
Malaysia	10.1	Sierra Leone	16.1	Madagascar	42.8
		Togo	15.9	Tanzania	39.6
				Central Afr.	
Tea				Republic	35.4
				Guatemala	33.6
Sri Lanka	40.0			Costa Rica	29.7
Kenya	25.2			Cameroon	29.0
Malawi	23.7			Kenya	27.8
				Nicaragua	25.5
				Haiti	22.9
				Zaire	20.1
				Cote d'Iv.	18.3
				Sierra Leone	14.8
				Equatorial	
				Guinea	14.5
				Dominican	
				Republic	11.5

Source: UNCTAD, 1988.

The Outlook for Commodity Prices

The significance of trade liberalisation is further emphasised when consideration is given to the outlook for commodity prices over the medium term. Again the long-term trends in commodity prices have been the subject of great international concern but limited action. The Integrated Programme for Commodities is now apparently about to get off the ground, if in a considerably attenuated form compared with the original proposals. Here we recapitulate some of the reasons for concern about the commodity price outlook, since those factors tend to reinforce the case for a much more liberal trade policy on the part of the developed countries vis-a-vis the exports of the developing countries.

There are a number of long-term structural factors which are likely to exert generally depressing influences on commodity prices. Problems of saturation for particular commodities among the developed market economies are likely to become more acute. As per capita income increases, the rate of expansion of demand for most agricultural goods slows down and eventually demand fails to respond to further income increases (i.e. the traditional Engel curve approaches an asymptote or saturation point). In the cases of the tropical beverages this point may be close for the majority of households in certain developed market economies (DMEs), including the United States, Canada, Japan and most of the countries of the European Community. In those countries, though, rising real incomes in the lower part of the income distribution may still induce further increases in overall demand.

On the supply side, the past and present efforts of many producing countries to increase yields by, improving cultivation techniques and *shifting to higher-yielding cultivars*, will continue to increase the supply of many commodities, including tropical beverages and oils, for some years to come. This is not only the case for developing countries. Improved yields in tobacco, rice and oilseeds are still encouraged by governments in North America and the European Community, both through publicly-funded research and, often indirectly, through commodity price policies, even where the overall intention may be to reduce output.

The broad lines of agricultural policy of the United States and the European Community are being re-evaluated in the light of the budgetary burdens of the present regimes. There is some reason for hope that the producers of tropical products will at last find some relief from the long-run upward trend, which has characterised the output of a number of similar or substitute commodities, in particular tobacco, rice and oilseeds, to the developed economies. Nevertheless, there will be time-lags in the implementation of policy change. Furthermore as temperate farmers are encouraged to reduce their output of these commodities, they may switch to other commodities, for example tropical fruit in Australia, semitropical fruit and vegetables in the southern Community countries and the United States, which present new competitive threats to third world farmers as a group.

Prospects for the tobacco market are furthermore prejudiced by growing concerns about health as, indeed, are those for the saturated oils which include palm oil and coconut oil.

Efforts to support prices through international commodity agreements incorporating both producers and consumers or through simple producer cartels have had a generally unhappy history. Buffer stock operations have frequently come to an end, either because funds for purchasing have been exhausted or the authorised stock has been reached, or, in the case of rising prices, the stock has run out. The former has happened particularly where prices have been driven by supply disturbances or "excess" production.

All in all, to the extent that generalisation is warranted since there are important differences between commodities, the outlook for the prices of tropical foodstuffs as a whole is marred by the likely continued expansion of output in the face of sluggish demand. The most recent World Bank projections for commodity prices in constant dollars, that is deflated by a projected index of prices of manufactured exports, has tropical beverages and rice prices declining marginally from their 1985-87 averages to the end of the century, while the real price of tobacco shows no trend and those of oils and fats increase but by less than 1 percent per year (World Bank, 1988).

Purpose of this Study

This study presents a quantified assessment of the impacts on the Community and the exporting countries of a range of plausible moves liberalising the imports of a number of important tropical agricultural products, cocoa, coffee, tobacco, rice, cassava and vegetable oils. The selection of products was based primarily on the importance of the products in the exports of the developing countries and the degree of Community protectionism in question. Tea and tropical woods, which are important in terms of trade flows do not face significant trade barriers and were excluded from the study.[1] Sugar was excluded on the grounds that a major study with largely overlapping purposes is currently being undertaken.

While world trade is relatively limited, cassava is an interesting case because it is an almost perfect substitute for the starch content of Community-produced cereals and so raises issues central to the functioning of the CAP, and, furthermore, is the first important example of an agricultural product where imports have been limited by "neo-protectionist" voluntary export restraint (VER) agreements with Thailand, Indonesia, China and recently Vietnam.

Estimates of the impacts of the elimination of tariff barriers (cocoa and coffee) or the extension of tariff preferences to all third world producers (tobacco) are made. In the cases of rice and cassava, estimates of eliminating the relevant non-tariff barriers are made, i.e. the variable levy on rice imports and the VER (plus tariff) on cassava imports, on the exporting countries and on the CAP budget. For cocoa and coffee non-tariff barriers in the form of excise taxes in certain

---

[1] However tea imports do face significant discriminatory excise taxes in certain Community countries. The effects of eliminating these taxes would be, relative to existing consumption, similar to the effects of eliminating the analogous taxes on coffee consumption, which are discussed in Chapter 4.

Community member states are more significant than the relatively low common tariffs. An exercise was done to evaluate the impact on the producing countries and on consumers in the Community of eliminating these taxes.

The principal tropical vegetable oils are palmoil, coconut oil and palm kernel oil. Both are major exports of South East Asia, but increasingly certain countries in Africa (Cameroon and Cote d'Ivoire) and South America (Honduras and Brazil) are investing in oil palm plantations. Estimates of the impact of eliminating GSP tariffs on tropical oils are included in the paper, but perhaps more important are the estimates of the effects of the proposed Community oils and fats tax on the exporters of these products (as well as on consumers in the Community).

In several cases calculations were made to assess the effects of planned changes in the Common Agricultural Policy on third world exporters of competing products. The plan to reduce Community output of round-grain rice in favour of long-grain are examined. In the case of the tobacco regime where the declared purpose is to increase Community output of high-quality varieties and reduce that of low-quality varieties, a simulation is undertaken to investigate the effects of achieving this goal by aligning Community prices to world prices.

Only the impacts of the liberalisation of trade or internal agricultural regimes in the Community are assessed quantitatively. To the extent that other significant importing countries undertake similar policies of liberalisation, the effects on the producing countries and on the Community consumers, producers or CAP budget could be significantly lessened or increased. This is not the case for tropical beverages where tariff barriers outside the Community are non-existent or small. Nor is it the case for cassava which is not competitive as a cereal substitute in major livestock-producing countries outside the Community. For rice, tariff barriers are generally small, at least under GSP arrangements, though the removal of Japanese quantitative restrictions on rice imports could ultimately lead to an increase in the world price and so improve the relative gains of the rice-exporting countries vis-a-vis the rice-importing countries including the Community.

Joint action would make a difference in the cases of tobacco and oilseeds and oilseed products. Here tariffs and NTBs are primarily aimed at protecting domestic producers and processing industries. But the United States, for one, is not going to agree reductions in tariffs on these commodities while continuing to guarantee current prices to domestic producers. They have the example of the impact of such an arrangement on the CAP budget, since oilseeds (and soybeans) enter the Community at a (GATT-bound) zero tariff.

Over time there is likely to be some multilateral disarmament where both domestic subsidies and trade barriers are dismantled in parallel. This sort of scenario is simulated in broad terms in the studies of Tyers and Anderson (for example, 1987, though these authors do not specifically consider oilseeds) and will ultimately be analysed using the OECD Trade Mandate model (see OECD 1987a).

However the aim is to assess the impact of plausible short-term policies for the Community. Where short-run multilateral action is ruled out,

these have to be plausible as unilateral policies, and it is the impact of Community action on its own that is considered.

One further remark is necessary before considering the results of the study. Most of the quantitative analysis concentrates on the direct gains and losses to the Community or to the producing countries whose exports of tropical products to the Community are liberalised, though, where relevant, the impact on other ex-porters to the Community of the product in question is considered. But moves to liberalise trade through eliminating tariff or non-tariff barriers will generally affect the world price, given that in most commodities Community importers do not face a perfectly elastic world supply schedule.

Some of the policy adjustments considered in this paper would have the effect of raising world prices, since they involve granting or extending tariff preferences in markets where supply schedules are less than perfectly elastic.

The extent to which a change in the world price will benefit or harm the developing countries, other than through their direct trade relations with the Community, will in the first instance depend principally on whether the value of their commodity ex-ports benefit from higher world prices more than the value of their commodity imports suffer. Where the indirect effects of world price changes might be significant, estimates are made to determine whether the welfare of the developing countries as a whole would be seriously affected and whether there would be major redistributional effects among these countries. These estimates are in part designed to forestall the familiar argument that the policy changes under consideration would, in overall terms, be damaging to the developing countries, either because of the effects of higher prices on third world importers or the effects of lower prices for exporters on non-Community markets.

Since this paper is about eliminating or reducing tariff and non-tariff barriers on tropical products, policy adjustments that could be undertaken relatively quickly and without major budgetary costs to the CAP, and certainly without calling into question its fundamental structure and operation, the effects of the proposals on the international allocation of production are minor.

However in the major studies of the impact of the total liberalisation of agricultural markets in the Community or in the OECD as a whole (Matthews 1985, Anderson and Tyers 1984, Tyers and Anderson 1987b, Koester and Tangermann 1985), these are among the critical issues. For example it is quite likely that the developing countries could produce and export to the developed countries many of temperate zone commodities. But the fact that the third world is a net importer of foodstuffs, and that eliminating agricultural protection in the developed countries will raise the world price of most of these, is, for the majority of developing countries, sufficient to set them against the goal of liberalisation per se. One of the outcomes of some progress in the Uruguay Round on tropical products might be to allay the suspicions and whet the appetites of the developing countries for the further opening of the agricultural markets of the developed world.

CHAPTER 2

EUROPEAN COMMUNITY TRADE IN TROPICAL PRODUCTS

The table below gives some background information on Community trade in most of the commodities discussed in this paper. Over the decade to 1986 the volume of Community imports of cocoa and coffee have grown strongly and, in both cases, the growth rate was higher in the second half of the period than in the first. Clearly the weakness of prices of these commodities in recent years cannot be attributed to a slowdown in absorption by the Community.

Table 2.1

Trends in the volume of EC imports of tropical products, according to groups of countries of origin, 1975-80, developing countries' share of total imports, 1986, and share in total exports to European Community, 1975

	annual growth rate of imports (exc. intra-EC)			imports from developing c's as percent	share in total exports to EC	
	total	devel-oped	devel-oping	total imports	devel-oped	devel-oping
Cocoa						
1975-80	1.5	-4.2	1.6	100	0.7	14.6
1980-85	4.1	-	4.1			
Coffee						
1975-80	2.2	1.6	2.3	100	0.4	28.2
1980-85	3.5	-	3.5			
Unmanufactured tobacco						
1975-80	1.1	-1.8	3.5	64	19.1	7.5
1980-85	-0.3	-2.5	1.1			
Rice						
1975-80	9.1	13.7	1.9	60	1.7	3.2
1980-85	3.9	-4.6	15.5			
Copra						
1975-80	-31.2	-41.5	-31.2	100	0.01	3.7
1980-85	-8.7	-	-8.7			
Palm nuts and kernels						
1975-80	-17.9	-	-17.9	100	-	0.9
1980-85	-4.8	-	-4.8			
Vegetable oils (a)						
1975-80	3.2	-14.1	5.7	92	3.5	15.7
1980-85	7.0	6.0	7.1			

Note a: excluding olive, soya, cottonseed and groundnut oils

Sources: OECD 1987b, 188-89; Eurostat Comext

Community imports of raw tobacco have started to slow down, reflecting the decline in consumption in most developed market economies (although tobacco consumption in the world as a whole continues to rise under the impact of Eastern Europe, China and certain other developing countries). Community imports from the developing world continue to increase at the expense primarily of imports from the United States.

In rice one can see the same pattern of a shifting balance of imports in favour of the third world, though here imports are still growing strongly if not at the high rates recorded in the first half of the decade.

Trade in copra and palm nuts is relatively minor, since the bulk of these products are processed into oil and meal in the producing countries. Imports of vegetable oils have been strong throughout the decade and their growth rate has actually picked up in recent years. Again the developing countries are the principal beneficiaries.

Table 2.2 gives a snapshot of the Community production and use of a number of commodities, which to varying degrees are substitutes for the tropical goods discussed in this paper. Clearly with commodities such as coffee, cocoa and tea, there are no significant substitutes produced in the Community, and such trade barriers as confront these goods are designed either to protect exporting countries with special preferences (in particular the ACP states) or, as is the case with excise taxes in certain Community countries, to yield public revenue.

Table 2.2

Production, domestic use, intervention and self-sufficiency (a) in the Community, selected commodities, 1985 and 1987 (million tonnes)

	Production		Domestic use		Intervention		Self-suff'y	
	1985	1987	1985	1987	1985	1987	1985	1986
rice	1.81	1.88	1.13	1.14	-	-	160	165
soft wheat	65.9	66.3	54.6	55.4	10.5	6.4	117	120
barley	51.2	47.8	40.9	39.0	2.0	4.1	125	123
maize	25.4	24.5	29.0	28.1	-	0.02	88	87
rapeseed	3.77	6.1	3.9	5.7	-	-	97	107
sunflower seed	2.71	3.6	2.8	3.5	-	-	97	97
soyabeans	0.33	1.39	12.6	13.0	-	-	3	11
tobacco	0.40	0.40	0.60	n.a.	.028	(b)	67	n.a

Note a: Self-sufficiency rates are calculated by dividing production by domestic use. They may differ from rates calculated by the Commission which use a variety of definitions.
b: tobacco from these crops is still being marketed and so far has not been bought into intervention

Source: Commission, 1987b, 1988a

The other goods under consideration are either produced in the Community, such as tobacco and rice, or have very close substitutes which are produced in the Community. Manioc is a substitute for the starch component of wheat or coarse grains for use in compound feedstuffs. Palm oil and coconut oil are substitutes for rapeseed, sunflowerseed and soybean oils. For some purposes they are almost perfect substitutes and, for others, they may be the preferred ingredients or, in others, they can only be substituted after costly processing or significant deterioration in the product.

These competing goods produced in the Community are all subject to Common Agricultural Policy regimes. Under many of these regimes the system of guaranteed prices has caused output to expand to and beyond the point of self-sufficiency. As can be seen in the table, the output of rice and all the cereals, except maize, has gone beyond self-sufficiency, and the surplus has to be sold on the world market with a subsidy or "restitution" payment. Whether this can be called "dumping" or not, the effect is to reduce world prices for these commodities and their substitutes and the export earnings of foreign producers.

In the case of rapeseed and sunflowerseed, Community output has or is just about reaching self-sufficiency, after a period of extremely rapid output growth. There are considerable complications in analysing these commodities, since they are grown for two quite distinct purposes, oil for human consumption and some industrial purposes, and meal (or cake) as a high-protein ingredient into compound animal feeds. The figures in the table for consumption are based on the seed import-export balance and production data. Thus they ignore imports and exports of oils and meal, and so only tell part of the story, though the general picture given by the figures in the table is a valid one.

Protection of Tropical Products in the European Community

Details of the European Community's tariff and non-tariff barriers facing exporters of the particular products discussed in this paper are listed in Appendix 2. Here we take a more general look at the levels of protection facing the agricultural exports of the developing countries to the Community, and compare these with protection in the other major developed countries.

The OECD has undertaken a study of agricultural protection in the DMEs using the concepts of producer subsidy equivalent (PSE) and consumer subsidy equivalent (CSE) (OECD, 1987a and 1987b). Calculations using these concepts for a number of developing countries have been undertaken by the United States Department of Agriculture (USDA, 1987a and 1988a).

Their purpose is broadly to compare internal DME producer and consumer prices with the most appropriate world reference price and to allocate the differences to different facets of agricultural market policies. In the Community, support to producers mainly stems from the Common Agricultural Policy. The CAP support measures typically take the form of variable import levies (related to target producer prices in the Community), export refunds, various forms of intervention in the internal market and certain commodity-specific forms of direct payments to producers. However using the actual rates of import levy or export refund

or the difference between target and world reference prices would lead to major problems of timing, consistency in coverage, quality among others (see OECD, 1987b, 245-47). Rather the PSEs and CSEs are calculated on the basis of data on expenditure on various headings under the CAP and under national agricultural support or consumer subsidy programs of the individual member states, which are then prorated over the volume of Community production and consumption of each commodity. Details are given in the OECD sources.

Average PSEs and CSEs were calculated for the period 1979/81 in the original OECD study. They have since been updated for each year to 1986 by the USDA and are presented with calculations for 16 individual countries[2] in (USDA, 1988a). A selection of the results is given in Table 1.3.

Table 2.3

Producer Subsidy Equivalents in DME markets for selected commodities of interest to the developing countries, average 1982-86

	EC	United States	Japan	Canada	Australia
sugar	45.4	77.4	67.6a	34.6	12.9
beef and veal	44.6	8.7	59.0b	9.9	6.4
rice	46.6	45.2	88.2	-	11.9
barley	14.2	28.8	96.9	32.1	14.3
wheat	25.0c	36.5	97.8	30.4	139.0
soyabeans	44.6d	8.5	71.0	13.5	-

Note a: beet sugar
b: beef
c: soft wheat; PSE for durum wheat: 38.4
d: rapeseed

Source: USDA, 1988a

It is clear that from a relative viewpoint, on the basis of these figures, it would be wrong to argue that the European Community is more or less protectionist than the United States. The figures for Japan are consistently higher than the other countries cited (other than for sugar) and the figures for Australia consistently lower (other than for wheat). Moreover it should be pointed out that, for Australia, the figures are based on data which did not yet fully reflect the results of the policy of reducing protectionism in agricultural markets.

However these figures are themselves subject to considerable qualification. For example, no account is taken of the Community quotas on the production of isoglucose, and thus the Community PSE for sugar is

---

[2] Argentina, Australia, Brazil, Canada, India, Indonesia, Japan, Mexico, New Zealand, Nigeria, Pakistan, South Africa, South Korea, Taiwan, Thailand and the United States.

likely to be underestimated. Also no effort is made to take into account "effective" protection, so the PSEs for beef and veal do not reflect the protection accorded to cereals used in their production.

Qualifications notwithstanding, the high degree of protection for these commodities in the three major industrial markets is striking. The high levels of protection do not only affect the exporters of the listed commodities themselves, but those of substitute commodities. Obviously the fact that sugar beet is being protected in the DMEs, rather than sugar cane, is little comfort to the cane producing countries of the Caribbean and Latin America. Not only are Argentina and Brazil, major exporters of soybeans, affected by protection on soybeans and rapeseed, but so too are Malaysia, Indonesia and the Philippines, which are major producers of palmoil or coconut oil. Thailand is the world's major exporter of cassava which competes as an animal feed with feed wheat and coarse grains.

In the cases of the tropical beverages, which are not produced within the Community and where there are no close substitutes benefiting from the CAP, levels of protection are considerably lower. Tariffs for cocoa, coffee and tea exist primarily to provide some degree of "preference" to the countries associated with the Community under the Lomé Conventions (the African, Caribbean and Pacific or ACP states). However in the case of the tropical beverages, certain Community member countries have imposed quite significant consumer taxes and the elimination of these would be of significant help to all producing countries, ACP or not (see Chapter 4).

Unfortunately PSE and CSE calculations have not been undertaken for tobacco, which features in this study and where Community producers operate under a CAP regime. Tariffs on unmanufactured tobacco tend to be high for the "least preferred" exporters, primarily the United States (over 20 percent), relatively low (6 to 14 percent) for the countries with Generalised System of Preferences (GSP) status and zero for ACP states. Here there are significant consumer taxes in most Community states and, despite low elasticities of demand for tobacco products, some reduction in these taxes would be of major benefit to all the exporting countries, though there are major health considerations which would make such a policy move controversial.

CHAPTER 3

METHODOLOGY

In recent years there has been a flurry of interest in the econometric modelling of agricultural markets. This has been to a large extent stimulated by increasing criticism of the protectionist policies of the major international players, the United States, the European Community and Japan, and by the insistence of the United States that, for the first time, the liberalisation of agricultural trade is to be a key issue, perhaps the key issue, in the current Uruguay Round of multilateral trade negotiations.

Traditionally the analysis of barriers to agricultural trade has been carried out using classical partial equilibrium (p.e.) Vinerian models. The comparative advantages of p.e. analysis are its transparency and its simplicity. Some of the barriers associated with the Common Agricultural Policy are complex. Variable levies typically include a fixed amount as well as a variable amount (related to the difference between the Community's threshold price and the world price - itself calculated in various ways), and, particularly with processed goods, a variety of additional specific or ad valorem charges. The preference given to ACP countries may include reductions or exonerations from some or all of these. The offer price facing a Community producer at the time he must make his output decisions may be an unknown future market price (which he may or may not be able to hedge) or a known or unknown intervention price, or the greater of the two. Some of these complications can be dealt with in a p.e. approach. For a discussion of the alternative modelling approaches see, particularly, Winters (1987).

Taking account of price effects (or cross-price elasticities of demand and supply) within specific agriculture markets may be a feasible complication. This "inter-sectoral" approach has been developed by Bucknell et al (1982) in the first detailed econometric analysis of the Common Agricultural Policy, though the specification of the "rest of the world" is quite restricted. The model associated with Rodney Tyers (see, among many publications, Tyers and Anderson, 1986 and 1987b) also follows this approach. In their 1986 publication, which underlay much of the analysis of agricultural protectionism in the 1986 World Development Report of the World Bank, the authors distinguish seven different commodity groups - wheat, coarse grains, rice, beef and lamb (or ruminant meat), poultry and pork (or non-ruminant meat), dairy products and sugar.

Going beyond the agricultural sector to make explicit economy-wide supply and demand functions for factors of production, to specify balance of payments constraints and to include macro-economic policy parameters is the purpose of general equilibrium (g.e.) approaches. Not surprisingly g.e. models generally work at a high degree of aggregation. The most ambitious model of this kind has probably been that of the International Institute of Applied Systems Analysis (see Parikh, 1987 for a summary and bibliography), which uses a disaggregation similar to that of Tyers and Anderson.

The more complex the model, that is the more it takes into account interrelationships between different markets, the greater the demands as regards data and parameter estimates. Despite the wealth of research that has gone into estimating demand and supply functions for different commodities, there is still a dearth of estimates of cross-price effects.

The solution adopted in this paper is to use single commodity p.e. techniques where the cross-price effects are likely to be small, and to resort to sectoral modelling where these effects are likely to be substantial. Thus for cocoa and coffee a single commodity approach is used, since there is no econometric evidence that there are significant cross-price elasticities of demand, despite a number of studies investigating this effect.[3] On the other hand, where inter-market relationships are clearly important in determining the effects of alternative trade policies for the commodity in question, we have used a sectoral approach. Tobacco is an example. Persuading tobacco farmers to switch from oriental sun-cured varieties to Virginia-type or Burley flue- or air-cured varieties is central to the policy of the Community for dealing with the excess of low demand tobaccos produced in Greece and Italy. Since the elasticity of supply substitution between these two sets of varieties is a crucial factor, it would clearly be wrong to assume it at zero. The substitutability of different vegetable oils is also critical as regards any liberalisation of tariffs on palm and coconut oils imports, since it determines the effects of such a policy on the markets for Community-produced rapeseed and sunflowerseed oil.

It should be noted that the main drawbacks of the traditional one commodity p.e. analysis also apply equally to inter-sectoral or g.e. models. The first of these disadvantages derives from the underlying assumption of perfectly competitive markets, or where, as in the case of CAP regimes, minimum guaranteed prices are determined by official fiat, the producers and consumers still operate according to the behavioural norms of perfect competition. This excludes, for example, the phenomenon of X-inefficiency. In reality, a reduction in the price of a certain commodity could stimulate increased labour productivity and higher yields. None of these model approaches capture the welfare gains from such a response.

Secondly none of these approaches begins to tackle the problems of either the adjustment costs or the dynamic effects of policy changes. The policy changes under consideration are generally likely to be rather minor in their effects of Community farmers, compared with the impacts of the current and future plans for the "reform" of the Common Agricultural Policy. In fact a number of the simulations take certain announced output objectives and at-tempt to estimate the impact of meeting these on the

---

[3] Here, however, there may appear to be some inconsistency in our approach. We do make some calculations of the effects of allowing the use of palm oil as a substitute for cocoa oil or butter in the production of chocolate. However this is a special case - the use of palm oil is currently limited by law, not by price. Liberalising trade alone would have no impact on this use of palm oil, though it is true that deregulating the use of palmoil in chocolate manufacture would have marginal impacts on cocoa and palmoil prices, which we have not estimated.

producers of substitutes in the third world. In other cases where an import regime is liberalised, the assumption can be made that Community farmers are protected by a continuance of the guaranteed price system, perhaps subject to thresholds on amounts bought-in, or by direct income subsidies. In either event the path of farm incomes will not be greatly changed. The CAP budget takes the strain. If the alternative assumption is made to the effect that overall CAP expenditures are fixed, then it can be assumed that the additional sectoral costs are offset by somewhat reduced incomes for all Community farmers.

For the producers in the developing countries, the dynamic effects may be considerably more important. If liberalisation gives a boost to production, it may at the same time permit the exploitation of economies of scale (for example, using clonal and other biotechnology), encourage improved agronomic management, lead to the development of technical skills and so on. The effects of such developments may have major macro-economic implications. If trade liberalisation also permits the significant expansion of a processing industry, the dynamic effects are likely to be considerably enhanced.

However it is not possible to generalise about the dynamic effects. They will differ from country to country and from commodity to commodity. The dynamic effects can only be assessed by studying the conditions peculiar to a given country, in particular the existence of technical and managerial skills, the availability of investment finance, opportunities for developing downstream or upstream activities, markets for by-products and so on. In other words such studies need to be cover all the ground of thorough project appraisal.

The Model

The flexibility and the transparency of the traditional Vinerian p.e. analysis are its great advantages. For example, while it was originally developed, first, to demonstrate and, then, to calculate the welfare gains of customs union formation, it has been used to quantify gains from the elimination of tariffs in the Tokyo Round, the establishment of systems of trade preference with or without tariff quotas and various types of non-tariff barriers within the European Community (Cline et al. 1978, Davenport 1986, Cawley and Davenport 1988).

There are a number of ways of going from the single good case to the sectoral case. The model used in this paper is similar to the model used by Tarr to examine the effects of "voluntary restraint agreements" on steel exports from Korea and other countries to the United States and the Community (1987), though we deal with a wider spectrum of trade barriers.

Starting with price, trade and output data and details of the trade regime (tariffs, variable levies, quotas, intervention prices), the model will generate new price, output and trade vectors, given some change in that regime. Welfare measures are then calculated in the traditional way. In the case of the elimination of a tariff there will be the consumer and producer surplus triangles and the transfer of the welfare equivalent of the tariff revenue.

Some studies use Hicksian welfare measures of compensated variation or equivalent variation. However as Jeon and von Furstenberg (1986)

demonstrate, it is doubtful whether any additional precision is to be gained by these theoretically preferable measures. Where comparisons with simple Marshallian estimates have been made the differences have amounted to no more than a few percent-age points, well within the range of uncertainty associated with the elasticity estimates. In addition where there is only one price change, integrability is assumed and the compensated demand curve is linear, the CV and EV formulae reduce to the Hicksian triangle. (p. 298) As regards producer surplus measurements, Jeon and von Furstenberg cite theoretical attempts to draw analogies with consumer surplus analysis. "when the producer surplus analysis was applied to factor inputs, ordinary and compensated factor demand curves were found to be exact counterparts of ordinary and compensated demand curves in consumer surplus analysis" (p. 386). By the same token the loss in precision from using the Hicksian measure is likely to be small.

In the case of a quota, the welfare gains are greater because there is no offsetting loss of tariff revenue. Supplementary calculations, such as of the impact of the policy change on the Common Agricultural Policy budget and on the foreign exchange revenues of the exporting countries, can also be made. Details of the data sources and elasticity assumptions are given in Appendix 2.

Appendix: The Mathematical Structure of the Model

Community demand and supply schedules are specified for each good within the sector. Only excess supply schedules are specified for the rest of the world, which is typically divided into three regions, the ACP states, the GSP-eligible exporting countries and the MFN-tariff countries.

$$D_i^c = a_i^c + \Sigma_i \; b_i^c \; P_i^c$$

is the demand schedule for the ith good in the Community.
The Community supply is given by

$$S_i^c = u_i^c + \Sigma_i \; v_i^c \; P_i^c$$

The excess supply of region j is

$$S_i^j = u_i^j + \Sigma_i \; v_i^j \; P_i^j$$

P_i^c and P_i^j may be related in a number of different ways.
In the event of a conventional tariff on exports of j's goods

$$P_i^c = P_i^j \; (1+t_{ij})$$

$P_i^j \; (1+t_{ij})$ will be the same for all j. If j is an MFN supplier, P_i^j is assumed to equal the "world" price. Any change in this price following a change in the Community trade regime affects the value of trade in the rest of the world outside the Community.

Where there is a guaranteed intervention price, PC_i in the Community, and there is no tariff or levy on imports

$$P_i^c = \text{Max} \; [P_i^j, \; PC_i]$$

A quota, Q_i^j would imply that

$$S_i^j = \text{Min } [u_i^j + \Sigma_i v_i^j P_i^j, Q_i^j]$$

Various combinations of tariff and non-tariff barriers can be introduced.

Market equilibrium implies that

$$D_i^c = S_i^c + \Sigma_j S_i^j$$

In order to show how the model can be used to solve for the changes in price or production and trade flows when the regime changes, consider the case of a sector where only tariff barriers exist. Also for simplicity assume that imports only come from one region. Then

$$A - U_c - U_r = V_c \; T \; P + V_r \; P - B_c \; T \; P$$

where A is a vector of a_i^c and the Us are vectors of the u_i's. The V's and B are matrices of the slope coefficients, the v_i's and the b_i^c's. T is a diagonal matrix of (1+ti), the tariff rates. Given assumptions on the elasticities, the slope coefficients are calculated from trade and production data. It is then straightforward to solve for the [A - U_c - U_r] vector. To obtain the vector of equilibrium prices, P*, after the tariff changes, the inverse of the matrix [V_c T* + V_r + B_c T*] is calculated with the matrix, T*, incorporating the new vector of tariffs. Then

$$P^* = [V_c \; T^* + V_r + B_c \; T^*]^{-1} \; [A - U_c - U_r]$$

CHAPTER 4

COCOA AND COFFEE

Over the years since 1950, the prices of tropical beverages have displayed considerable instability. In the 1950s and 1960s there was no consistent pattern but they, like most commodity prices, failed to keep abreast of the prices of manufacturing exports.

Since 1980 the international markets for these commodities have been generally weak. In real terms, that is relatively to the export price of manufactures, the prices of tropical beverages have fallen at average annual rates from 1.3 percent in the case of coffee to 6.9 percent in the case of cocoa over the period, 1980 to 1986 (IMF, 1987, 94ff.)

The weakness of prices in recent years has been partly the sluggishness of the world economy as a whole. However supply factors have also tended to weaken prices. Many exporting countries, encouraged by relatively high real prices in the 1970s, have undertaken programmes to increase output of their primary production, so that when demand has not actually fallen but simply stagnated, there has still been downward pressure on prices.

Table 4.1

Changes in prices of tropical beverages, 1950 to 1987, dollar and SDR indices and SDR index deflated by index of average prices of exports of manufactures (average annual rates; percentages)

	1960/ 1950	1970/ 1960	1980/ 1970	1986/ 1980
I US dollar				
coffee	-3.19	4.32	14.12	1.71
cocoa	0.85	1.62	14.33	-4.04
tea	-0.72(a)	-2.68	7.39	-2.37
II SDR				
coffee	-3.19	4.32	17.16	-3.71
cocoa	0.85	1.62	17.39	-9.15
tea	-1.43	2.29	10.26	-7.57
III SDR deflated by index of prices of manufacturing exports				
coffee	-3.19	2.51	2.50	-1.34
cocoa	0.85	-0.13	2.69	-6.91
tea	-1.43	-4.36	-3.54	-5.29

Note a: 1960/1951

Sources: International Financial Statistics, 1987 Yearbook, United Nations, Monthly Digest of Statistics. Prices used are as follows; cocoa - Ghana (London), coffee - Brazil (New York), tea - average auction (London).

The FAO (1987b) suggests that the markets for tropical beverages over the medium term will be constrained by saturation of consumption levels in the industrial countries, which account for 80-90 percent of consumption. The organisation predicts a market growth of only one percent per annum in the industrial countries, though growth will be faster in the third world and the centrally planned economies.

The World Cocoa Market

In the decade of the 1970s world cocoa consumption increased slowly at a mere 0.8 percent per year to average 1.5 million tons in 1979-81. In the 1980s grindings have risen much faster, that is by some 3.5 percent on average each year. Meanwhile production expanded by an average annual 0.5 percent in the 1970s to reach some 1.6 million tonnes, but in the 1980s has exceeded consumption by 1/2 to 1 percent each year. Although production has all but stagnated since 1984, it still exceeds grindings by some 100,000 tonnes.

As a result of the imbalance between production and consumption, world cocoa stocks are now at their highest level since 1981/82. Prices have continued downwards since 1984 and in 1988 have reached their lowest levels in six years.

The producer countries have tried to improve their receipts by undertaking processing of the cocoa beans. However the markets in cocoa butter, paste, cake or powder have been no firmer than that in beans and most of the processing facilities have proven unprofitable.

Table 4.2

World production of cocoa , 1983-84, 1985-86, 1987-88, '000 tonnes

	1983-84	1985-86	1987-88
Africa	859	1114	1131
of which			
Cote d'Ivoire	411	585	630
Cameroon	108	118	125
Ghana	159	219	185
Nigeria	115	110	135
Latin America	515	647	690
of which			
Brazil	302	376	426
Asia	140	209	285
of which			
Malaysia	80	125	190
World total	1514	1970	2106

Source: Gill and Duffus, quoted in Marches Tropicaux, 6 May 1988

The developed countries are responsible for some 90 percent of imports of cocoa beans and products. The European Community is the largest market, taking about one third of world production in 1984-85, followed by the United States which took about one quarter while the Soviet Union took about 13 percent. Japan is a relatively minor consumer of chocolate and other cocoa products, and took only 4.5 percent of world production in that period. Tables 4.2 and 4.3 show production and grindings (the closest measure to consumption) of cocoa beans and cocoa products by the major trading countries and blocks.

Table 4.3

World grindings of cocoa, 1983, 1985 and 1987, '000 tonnes

	1983	1984	1987
Developing c'ntries	492	642	644
Developed c'ntries	1160	1196	1264
of which			
EC-7 a	574	629	657
Soviet Union	145	155	165
Eastern Europe	84	88	92
United States	194	205	236
Japan	34	34	36

Note a: Germany, France, Italy, United Kingdom, Netherlands, Belgium, Spain

Sources: Gill and Duffus, quoted in Marches Tropicaux, 6 May 1988; USDA, 1988c.

The ACP countries, who enjoy tariff-free exports to the Community, have lost market share in the Community in the period 1980 to 1986 to the benefit of other producing countries, most notably Malaysia (see Table 4.4).

Table 4.4

Shares of ACP and non-ACP exporters in Community (EC-10) imports of cocoa beans, 1981-82 and 1985-86, percent

	1981-82	1985-86
ACP	89.9	83.8
non-ACP	10.1	16.2

Source: Eurostat Comext.

It is the perceived obligation to the ACP countries that accounts for the remaining tariffs on the imports of beans from the non-associated countries. Naturally there are strong pressures from the ACP countries to maintain the present tariff preferences, a position for which there is considerable support within the member states.

The Community Trade Regime for Cocoa

The tariff regimes for cocoa of the Community, the United States, Japan and Canada are given in Appendix 2. While the EC is the only major importing nation to impose a tariff on raw and roasted beans, the level is low at only 3 percent (for which there is no GSP treatment). Of the other major OECD importers, only Austria, Finland and Australia impose a tariff but this only effects beans shipped through (and possibly roasted) in a non-producing country, since the GSP rate on beans is in all these cases zero.

In the European Community, Japan, Switzerland and New Zealand, in particular, there is significant escalation against goods processed from cocoa, in particular cocoa paste, butter, powder and chocolate. Tariff escalation is discussed in Appendix 1.

With such a low tariff level it is not surprising that the effects of eliminating it altogether are not very significant for the producing or the importing countries. The welfare loss to the Community is made up of a positive terms-of-trade gain of 4.9 million ecu and a tariff revenue loss of 8.3 million ecu. As is seen from the table, the welfare effect on the exporters is very close to the change in their export price. That is because the "welfare triangle", or gain or loss on the increase or decrease in exports is small owing to the low import demand and export supply esticities. Almost all the gain or loss derives from the change in the value of the existing volume of trade. These low elasticities also explain the low global net welfare gain - the consumer gain in the Community is more than offset by the loss in tariff revenue - while the net Community loss and the ACP loss just compensate for the GSP gain.

Table 4.5

Effects of eliminating tariff on GSP imports of cocoa beans on the Community and on ACP and GSP exporters, (percent. of av. 1985-86 levels, except last column)

Direct effects:

	price(a) of impts/expts	volume of impts/expts	welfare as % initial trade	welfare ecu mill.
EC-10	-0.28	0.16	0.28	-3.4
ACP	-0.28	-0.23	-0.28	-4.1
GSP	2.62	2.10	2.65	7.6

Indirect effects (b):

redistribution within LDCs	5.6
redistrib. from non-EC developed c'tries to LDCs	32.0
of which to ACP states	2.0
total gains to LDCs	35.5
of which to ACP states	-2.1

Note a: inclusive of tariff where applicable
b: indirect effects based on 1985 trade data (UNCTAD, 1988).

Table 4.5 not only gives the estimated welfare effects of the increase and redirection of trade between the Community and the producing countries, but also the welfare effects of changes in trade flows between the producing countries and the rest of the world. The world price is estimated to rise 2.6 percent. This rise will benefit all producers, including the ACP countries since they too will receive a higher price on markets outside the Community. The losers will be the developed countries, both the DMEs and the Centrally Planned Economies, and the cocoa-importing developing countries. However by far the bulk of exports go to the developed countries, so that the redistribution of welfare from the developed countries outside the Community to the developing, induced by the rise in world prices is, at 32 million ecu more substantial than the direct effects through Community trade. This is also the estimate of the increased foreign exchange earnings received by the developing countries taken together.

Clearly the sums involved in this policy change would be relatively small and, indeed, much less than the price fluctuations in cocoa exports which derive from climatic and other factors. The instability index calculated by UNCTAD, which is the average absolute deviation of monthly market prices about the exponential growth trend, was 10.3 percent between 1980 and 1987. Relative to that a price rise of 2.6 percent for the GSP countries is not substantial. On the other hand this 2.6 percent increase would represent a once-and-for-all upward shift in the price level on the world market and any improvement in the terms-of-trade of the cocoa-producing countries would be welcome to them.

The tariff on imports of cocoa from the GSP countries is only 3 percent. On the other hand the total tax on consumption (VAT and excise taxes, where applicable, combined) of products containing cocoa in the Community is 9.92 percent. It is not surprising that changes in consumer taxes are potentially much more important to the exporting countries.

The Importance of Consumer Taxes on Cocoa Products

According to the Commission's proposal on tropical products to the Uruguay Negotiations, reductions in consumption taxes on tropical products are on the table. In fact as regards cocoa and cocoa products the offer does not amount to much, since excise taxes are, with the notable exception of Denmark, low where they exist at all. Denmark with the only substantial excise duty on cocoa only accounts for about 0.4 percent of the Community's cocoa imports.

There is no suggestion that VAT tax rates are a subject for discussion in the Multilateral Trade Negotiations. However the White Paper on the Completion of the Internal Market (Commission, 1985) does specifically call for the harmonisation (or "approximation") of VAT and excise taxes as one of the steps necessary to achieve the integration of the Community market by the end of 1992. The proposals are highly controversial and their realisation is in considerable doubt. Nevertheless it is interesting to do some analysis of the impact were they to be realised. Under the proposals the level at which taxes on cocoa products are set would be significant for the exporting countries,

though the impact would be to some extent cushioned by the low elasticities of demand in the Community countries.

The overall rate of taxation (combining both VAT and excise taxes where applicable) currently varies from zero in Greece to almost 130 percent in Denmark.[4] The proposals for tax harmonisation do not require the same rates for the same products in all member states. There would be an agreed norm for the standard rate of VAT and each member state's rate would have to lie within a given band bracketing the norm. There would also be a reduced rate norm for socially sensitive goods. Still the possibility of a Community agreement to benefit certain developing countries by a common, relatively low, rate of consumer taxation on their exports, or products largely derived from their exports, remains open.

In any event it is useful to estimate the effects to which cocoa-exporting countries are likely to be affected by possible changes in consumer taxation. In the calculations, the elasticities of supply and demand for products based on cocoa, that is primarily chocolate, are taken as the same as those for cocoa itself.[5] Reductions in tax on cocoa-based products are assumed to be to be partly passed on in the form of lower consumer prices (gross of tax) and partly to benefit the cocoa producers in higher prices (net of tax), according to these elasticities. Thus the possibility that the cocoa-processing firms, i.e. chocolate producers, in the Community, might, through their oligopolistic power, be able to appropriate some of the gains in the form of higher unit profits, is not considered. To the extent that this might happen on a significant scale means that the estimated gains from lower taxes to the producing countries are overestimated.

To illustrate the importance of consumer taxes on cocoa products, we assumed a common VAT rate of 5 percent with no additional excise taxes.

These tables demonstrate how important the rate of tax set on cocoa products is to both the importing and the exporting countries, notwithstanding the low elasticities of demand assumed for the goods in question. The boost to consumer surplus, net of the revenue loss, in the Community is, at 46 million ecu or 2.7 percent of the value of cocoa imports, significant.

As for the cocoa-producing countries, the increase in imports would have amounted to 55.6 million ecu or 2.8 percent of the 1985/86 average value of imports. While this might not seem a large sum in aggregate, it is somewhat greater than the expected yearly increase in world-wide demand for beans. It would also be extremely significant for certain of the major producers whose export earnings are highly dependent on cocoa. The

---

[4] Excise tax rates vary depending on whether the product is in bean or processed form . We have used that for beans (88.4 percent at 1986 prices) which constitute the overwhelming bulk of imports.

[5] Some studies have shown that import demand elasticities tend to rise with the degree of processing (Balassa and Kreinin, 1976, 127). Our elasticity and the results of the simulation can then be interpreted as conservative estimates.

1.8 percent increase in world prices that this policy change is estimated to effect will benefit all producers, whether or not they export to the Community. The estimate of the net transfer of welfare from non-Community developed countries to the developing countries as a group is 22 million ecu.

Table 4.6

Effects of harmonising consumption taxes on cocoa products at 5 percent on the Community and on ACP and GSP exporters, (percent. of av. 1985-86 levels, except last column)

Direct effects:

	price(a) of cons/expts	volume of impts/expts	welfare as % initial trade	welfare ecu mill.
EC-10	1.8	1.4	2.7	46.0
ACP	1.8	1.4	1.8	25.8
GSP	1.8	1.4	1.8	5.1

Indirect effects (b):

redistribution within LDCs	3.0
redistrib. from non-EC developed c'tries to LDCs	22.0
of which to ACP states	1.4
total gains to LDCs	52.9
of which to ACP states	27.2

Note a: inclusive of tariff where applicable
b: indirect effects based on 1985 trade data (UNCTAD, 1988)

Note a: price of cocoa products at Community border; import price inclusive of tariff.

The Impact of Relaxing Regulations on the Use of Cocoa Butter

At present the original 6 Member States, except the Netherlands, prohibit any product labelled chocolate containing any vegetable oils or fats other than cocoa butter or oil. This was designed to protect the chocolate producers (and, some would say, consumers) in the pre-enlargement Community from lower cost producers in the United Kingdom. With the integration of the Community market by 1992, either Community-wide regulations must be adopted or, following the Cassis de Dijon principle each member state will have to accept goods which conform to the regulations applying in the country of manufacture. It is generally expected that something akin to the U.K. regulation that up to 5 percent by weight of vegetable oils, other than cocoa, will become the Community norm. Palm oil is currently the most suitable substitute for cocoa oil and the impact on the palm oil-producing countries is discussed in Chapter 8.

Table 4.7

Direct effects of Community tax harmonisation of cocoa products at 5 percent on member states and on ACP and GSP countries

I. on exporting countries

	increase in exports (ecu mill.)		increase in exports (ecu mill.)
ACP countries	46.4	GSP countries	9.2
of which		of which	
Cote d'Ivoire	21.2	Malaysia	3.1
Cameroon	7.7	Brazil	2.6
Nigeria	5.7		
Ghana	4.9		

II. on EC member states

	current tax rate		change in tax rev. as percent. consump.	cons. welfare gain as perct. consump.
	excise	VAT		
Germany	0.0	7.0	-1.9	0.1
France	0.3	5.5	-0.5	0.5
Italy	3.9	9.0	-8.0	5.7
United Kingdom	0.0	12.0(a)	-6.8	4.6
Netherl'ds	0.0	12.0	-6.8	4.6
BLEU	0.0	6.0	-0.9	-0.1
Ireland	0.0	11.5	-6.3	0.4
Denmark	88.4	22.0	-123.2	61.8
Greece	0.0	0.0	4.9	-6.7

Note a: the VAT rate on chocolate confectionery in the United Kingdom is 15 percent. The implicit rate on cocoa inputs is estimated at 12 percent.

As regards the cocoa exporters the new Community norm would imply a reduction in total cocoa bean, powder, butter and oil exports to the original six member states, less the Netherlands, of almost 5 percent compared the current situation. Certain high-grade cocoa and chocolate products might continue to be manufactured without other vegetable oils but these are unlikely to account for more than 10 percent of the market (Groupe MAC, 1988). On the basis of average 985/86 import data, cocoa producers would lose exports worth 49 million ecu or approximately 2.5 percent of their total exports to the Community.

The World Coffee Market

Table 4.8 and 4.9 summarise the recent situation in the world coffee market. Latin America, and in particular Brazil and Colombia, constitute the leading producers. The remainder of Latin American production is

made up of relatively small amounts produced in a number of countries, of which the most important is Mexico.

The share of Africa in world output has fluctuated about a stable level for some years. The largest producers are the Cote d'Ivoire and Uganda, both of whom have increased exports in recent years at the expense of Kenya and Tanzania. In the Far East, Indonesian output has grown strongly in the 1980s.

Table 4.8

World coffee exports, 1981-83, 1984, 1985, '000 tonnes

	1981-83 average(a)	1984	1985
Latin America	2243	2504	2551
of which			
Brazil	884	1031	1014
Colombia	534	599	585
Africa	987	900	1011
of which			
Cote d'Ivoire	223	188	266
Uganda	144	133	152
Asia and Oceania	402	484	502
of which			
Indonesia	241	294	293
Malaysia and Singapore	50	61	64
World total	3632	3888	4064

Note a: 1983, for individual countries outside Latin America

Sources: FAO, 1987b.

Clearly the European Community, even if its share of world production is on a downward trend, is still the most significant importer and its policy on tariffs and taxes is of crucial importance to the producing countries. The Community tariff regime is, like that of cocoa, predicated on preferences for the ACP countries.

Table 4.9

World coffee imports, 1981-83, 1984, 1985, '000 tonnes

	1975-77	1981-83 average	1984	1985
Developed countries of which	3112	3408	3470	3635
EC-12	1175(a)	1548	1507	1588
United States	1031	963	1010	1081
Soviet Union	50	42	48	57
Eastern Europe	151	164	187	201
Japan	130	188	223	231
Developing countries	166	199	218	225
World total	3278	3607	3688	3860

Note a: EC-10

Source: ibid.

Table 4.10

Shares of ACP and non-ACP exporters in Community (EC-10) imports of coffee beans, 1981-82 and 1985-86, percent

	1981-82	1985-86
ACP	37.8	42.1
non-ACP	62.2	57.9

Source: Eurostat, Comext

Prospects for Coffee Producers

After mineral oil, coffee is the most important raw material recorded in international trade. World production has traditionally shown long periods of stagnation, interspersed by short periods of rapid expansion usually provoked by high prices. In the short run production fluctuates wildly in response to weather changes, particularly frost in Brazil, fluctuations that are often accentuated by the two-year cycle in coffee production (FAO, 1986, 115).

Yet, apart from these fluctuations and in spite of falling real coffee prices, the trend of world output has continued to rise over the 1980s. The five major producers, Brazil, Colombia, Indonesia, the Cote d'Ivoire and Mexico, account for nearly 60 percent of world output. Though few trees have been planted in these countries in the course of this decade,

such plantings as have take place will have significantly higher yields than the older generation of trees. The trend in output will then continue to be up, though at a lower annual rate than the average 3 percent seen so far this decade.

In the coffee market attempts to control prices have included both traditional commodity stabilisation agreements with both producers and consumers as members and straightforward producer cartels. It would appear that the succession of agreements may have contributed to somewhat higher prices and export earnings than would otherwise have obtained. Nevertheless the underlying problems of increasing capacity in the face of inelastic demand survive. The outlook for prices is gloomy. Recently the World Bank has forecast that coffee prices in constant dollars (i.e. relative to manufactured goods export prices) in the year 2000 would be 25 percent down on their 1984/85 level (World Bank, 1988).

The EC Trade Regime for Coffee

Details of the tariff regime on coffee imports are given in Appendix 2. As with cocoa, tariff rates on green beans are relatively low at 5 percent for MFN suppliers, 4.5 percent for GSP suppliers and zero for ACP suppliers. The principal rationale for maintaining tariffs on GSP suppliers (there are no imports from MFN countries, other than some occasional re-exports) is the commitment to preferences for the associated states. No other major developed importing country imposes tariffs on beans.

There is considerable tariff escalation in the Community rates for coffee products. Decaffeinated beans from GSP suppliers are charged at 8.5 percent, roasted at 11.5 percent, roasted and decaffeinated at 12.5 percent and soluble (instant) coffee, extracts and essences at 18 percent (though there is a GSP quota of 19,200 tonnes of soluble coffee chargeable at 9 percent). Clearly this escalation cannot be attributed to the need to maintain ACP preferences (though ACP coffee products do enter tariff-free), but stems from the wish to protect the processing industry in the Community.

Table 4.11

Effects of eliminating tariff on GSP imports of coffee beans on the Community and on ACP and GSP exporters, (percent. of av. 1985-86 levels, except last column)

Direct effects:

	price(a) of imps/expts	volume of impts/expts	welfare as % initial trade	welfare ecu mill.
EC-10	-1.84	0.61	1.84	-36.8
ACP	-1.83	-0.84	-1.83	-44.6
GSP	2.47	1.60	2.49	82.9

Indirect effects (b):

redistribution within LDCs	20.4
redistrib. from non-EC developed c'tries to LDCs	171.6
of which to ACP states	30.2
total gains to LDCs	209.9
of which to ACP states	-14.4

Note a: inclusive of tariff where applicable
b: indirect effects based on 1985 trade data (UNCTAD, 1988).

Table 4.11 shows the estimates of the impact of eliminating Community tariffs on coffee beans. Direct welfare gains to the GSP countries, though relatively modest in absolute terms, are almost double the losses to the ACP states. In both cases, measured relative to existing exports to the Community, they are close to the percentage change in the unit price of exports. In terms of the year-to-year price fluctuations experienced in the 1980s, these price changes are small. However, in the case of the non-ACP exporters the gains are about double the expected annual growth in world trade in beans (and thus total export earnings at constant prices). The welfare loss to the Community is made up of a positive terms-of-trade gain of 16.3 million ecu and a tariff revenue loss of 31.1 million ecu.

The indirect gains through the transfer of welfare and foreign exchange earnings through the rise of the world price are greater. It is estimated that a welfare transfer equal to 172 million ecu from the developed non-Community importing countries to the third world as a whole takes place. As the non-producing developing countries were small buyers of coffee on the world market, there will be a rather small transfer of welfare within the developing country group.

The Impact of Eliminating Excise Taxes

In contrast to the situation as regards cocoa, excise taxes on coffee in the Community are substantial in several of the major importing countries. Germany has a rate of 40.9 percent on beans and Italy charges 9 percent. Belgium and Denmark charge excise duty on coffee at rates of 5.7 and 15.1 percent respectively. In this case, if these duties are fully negotiable, the Community's Uruguay Round offer on coffee products could be of real significance to the exporting countries.

It is assumed that the price within the Community changes by the same percentage as the price of imported coffee beans, that is that there is no oligopolistic creaming off of the benefits of tax reductions in the form of higher profits by the coffee importers or manufacturers of soluble coffee.

Table 4.12

Effects of eliminating excise taxes on coffee and coffee products on the Community and on ACP and GSP exporters, (percent. of av. 1985-86 levels, except last column)

	price(a) of cons/expts	volume of impts/expts	welfare as % initial trade	welfare ecu mill.
Direct effects:				
EC-10	5.1	2.9	9.3	536.5
ACP	5.1	2.4	5.2	126.4
GSP	5.1	3.3	5.2	173.6
Indirect effects (b):				
redistribution within LDCs				42.0
redistrib. from non-EC developed c'tries to LDCs				354.3
of which to ACP states				62.4
total gains to LDCs				654.3
of which to ACP states				188.8

Note a: weighted price of coffee and coffee products in Community; import price inclusive of tariff
b: indirect effects based on 1985 trade data (UNCTAD, 1988).

The gains to such a liberalisation are substantial, both for consumers in the Community and for exporters in the producing countries. Community welfare is estimated to rise by over 500 million ecu. As is seen in the next table this gain will be concentrated where taxes are highest, in particular in Germany and Denmark. It should be emphasised that the welfare gain cited in Table 4.12 is the estimated net gain to the economy. The direct gain to consumers would be more than twice as great, but this is of course partly offset by losses in tax revenue to the public sector.

The world price is calculated to rise by 5.1 percent. The producer welfare gains from exports to non-Community countries will be more concentrated in Latin America than those from exports to the Community with Brazil and Colombia being the principal gainers. Developing countries account for less than 6 percent of world imports, and the gross welfare loss to these countries from higher import prices will be of the order of 77 million ecu. On balance the LDCs are estimated to record a gain of over 650 million ecu or over 8 percent of the total value of their 1985 coffee exports.

Table 4.13

Direct effects of EC excise tax elimination on coffee and coffee products on member states and ACP and GSP countries

I. on exporting countries

	increase in exports (ecu mill.)		increase in exports (ecu mill.)
ACP countries	185.4	GSP countries	287.5
of which		of which	
Cote d'Ivoire	41.9	Colombia	106.7
Kenya	21.0	Brazil	99.3
Uganda	19.1		
Zaire	18.1		
Cameroon	17.6		

II. on EC member states

	current excise rates	change in tax rev. as percent. consump.	cons. welfare gain as perct. consump.
Germany	40.9	-42.8	26.5
France	0.	0.2	-5.1
Italy	9.0	-9.2	3.6
Un'd Kingdom	0.	0.	-5.1
Netherlands	0.	0.2	-5.1
BLEU	5.7	-5.7	0.6
Ireland	0.	0.	-5.1
Denmark	15.1	-16.6	8.8
Greece	0.	0.	-5.1

CHAPTER 5

TOBACCO

The world tobacco market has been to a large extent segmented, both on a geographical basis and on the basis of different types of leaf and methods of curing. The countries of Southern and Eastern Europe, Italy, Greece, Bulgaria, Yugoslavia and Turkey have traditionally grown and smoked Oriental sun-dried varieties, though, with increases in income, consumers in these countries are switching to flue-cured and Burley varieties. The United States is the second largest world producer (after China) and is the leading exporter of unmanufactured tobacco with about 18 percent of world exports. Three-quarters of United States exports are of flue-cured and Burley varieties. China is encouraging a shift towards Burley production.

Table 5.1

World production of raw tobacco and production in principal exporting countries (000 tonnes and percent)

	1973	1985	1987	average growth rate 1973-1985	1985-1987
Production					
EC-12	264.0	405.9	385.7	3.6	-2.5
China PRC	887.0	2319.6	2094.7	8.3	-5.0
United States	831.0	686.6	558.1	-1.6	-9.8
India	417.0	472.8	447.7	1.1	-2.7
Soviet Union	305.0	376.0	381.0	1.8	0.7
Brazil	199.0	397.0	410.0	5.9	1.6
Turkey	177.0	175.7	175.0	-0.1	-0.2
Bulgaria	148.0	126.9	138.2	-1.3	4.4
Argentina	89.0	60.5	n.a.	-3.2	n.a.
Malawi	72.0	77.1	66.7	0.6	-3.5
Mexico	60.0	53.8	38.7	-0.9	-15.2
Zimbabwe	30.0	108.7	138.5	11.3	12.9
World	4898.0	6828.1	6467.8	2.8	-2.7

Sources: Commission (1988a); USDA (1987b).

At the world level the recent cut backs in production have been stimulated by the accumulation of excess stocks. World consumption is still rising, led by China, certain other developing countries and Eastern Europe. Table 5.1 shows that production has continued to increase in the Community despite almost static consumption, though there has been some reduction in output since 1985. Meanwhile rapid expansion of production has being taking place in China, Brazil and Zimbabwe while it is declining rapidly in the United States.

In the United States per capita consumption of tobacco products has been declining at an annual rate of 2.8 percent since 1981. Tobacco exports have declined nearly 40 percent since 1978 in volume, though there has been some compensating rise in cigarette exports. In volume terms the United States was a net importer of leaf tobacco in 1987 for the first time, reflecting a trend to the use of lower-cost imports of flue-cured and Burley leaf at the expense of domestic production. Imports accounted for one-third of processing requirements in 1987.

Tobacco consumption in the EC-10 rose at an average annual rate of 0.3 percent over the period 1973 to 1985, and has been declining since then. Exports by the Community grew in volume terms at an annual rate of 6.6 percent over the same period.

The real world price of tobacco, that is the dollar price deflated by a dollar index of the price of exports of manufactured goods, fell 19 percent over the decade to 1980 (World Bank, 1987). Since then the fall has continued. In 1987 the real price had declined a further 30 percent. The World Bank does not expect any significant upswing in the real tobacco price in the years to 2000 (though its latest commodity price forecasts do include a 16 percent improvement on the depressed 1987 level).

Part of the explanation for the weakness of world prices recently has been a change in the policy of the U.S. intervention agencies. In the United States there is a comprehensive system of price support, but prices which, in any event, lagged variable production costs, are, since 1987, reduced by 1.4 percent each year from the level they would otherwise be. The prices are only guaranteed for quotas for each principal variety. If market prices do not meet the loan rate prices the farmers may give title for their loan stocks to the Commodity Credit Corporation (C.C.C.). Tobacco output is now being reduced while accumulated loan stocks are being sold both domestically and in export markets. While the support system in the past tended to support the world price, since stocks would be withheld from the world market until the loan rates were reached, since 1986 the C.C.C. and the Flue-Cured Stabilisation Co-operative have been able to sell their accumulated stocks at the prevailing market price.

Despite these low prices, the tobacco manufacturers are concerned that there is a severe mismatch in the quality supplied and demanded. Quite apart from the lack of demand for the sun-dried Oriental varieties produced in Italy, Greece and the Eastern Mediterranean countries, there is a shift in consumer preferences away from dark tobaccos towards low-tar low-nicotine light varieties (EIU, 1987). Manufacturers claim that it is difficult to obtain sufficient quantities of both the tobacco with the desired aromatic, taste and combustion properties which give "character" to the cigarette as well as the good quality neutral, filler tobacco (Tobacco Quarterly, May 1988). A large number of countries from Canada to Zimbabwe to China have government programs in operation to encourage the switching of production to the desired varieties.

Table 5.2

EC Share of world trade in raw tobacco (000 tonnes and percent)

	1973	1985	1986	average growth rate 1973-85	1985-86
Imports					
World	1251.5	1390.3	1350.0	0.9	-2.9
of which					
EC-12	493.2	490.0	456.0	-0.1	-6.9
EC-12 as percent	39.4	35.2	33.8	-	-
Exports					
World	1245.4	1413.8	1310.0	1.1	-7.3
of which					
EC-12	60.9	131.0	132.5	6.6	1.1
EC-12 as percent	4.9	9.3	10.1	-	-

Source: Commission (1988a).

The Community imports over 40 percent of its unmanufactured tobacco from the United States. Of the rest, the biggest single supplier with some 17 percent of Community imports is Brazil, followed by Zimbabwe with 9 percent and Malawi with 7 percent. Altogether the ACP countries supply 17 percent of Community tobacco imports.

As an exporter the Community's share in the world total, as well as in absolute terms, is increasing. This is closely related to the Common Agricultural Policy regime for tobacco which offers a guaranteed price to farmers (up till this year independently of the demand for the variety) as well as a subsidy permitting surplus quantities of the less popular varieties to be sold on the world market.

EC market organisation for tobacco

While the Community is a significant importer of unmanufactured tobacco, taking some third of total world exports, Community production itself is equivalent to 45 to 50 percent of Community demand. However there is a mismatch between the varieties and the qualities produced in the Community and the demand by processors, with the result that the Community exports some 40 percent of its production and imports 70 percent of its processing requirements.

Although lower prices and premiums (down by about 15 percent in the last four years) have been triggered by the stabilising

mechanism, farmers have not reduced their output of the varieties in surplus. Rather they have sought to maintain their incomes by increasing output. However the Commission argues that production would have come down, even without the latest tightening of the stabiliser mechanism, "..as both production and areas planted have tended to decline in recent years, the actual forecast [for 1993/94] is about 420 000 tonnes" (Commission, 1988b, 14). However this decline in output is somewhat mysterious. According to Commission figures output of tobacco as a whole, and for the major varieties, has continued to rise in recent years but for one year, 1986, when weather conditions were unusually adverse. (op. cit. 91). Still acreage did fall, if only a total of 2.2 percent between 1985 and 1987.

The Mechanism of the CAP Tobacco Regime

At present there is a price and intervention scheme covering 31 varieties of tobacco (the number of varieties covered has expanded over time). For each variety a norm price (equivalent to the "target" price for other CAP regimes) is fixed every year which has been largely determined by the production costs of the farmers (OECD, 1987b). On the basis of the norm price, an intervention price (recently 85 percent of the norm price) for each variety is set. Farmers are guaranteed to receive at least the intervention price. A derived intervention price is set for baled tobacco, and a premium is paid to buyers who purchase leaf tobacco directly from the growers. This premium ensures that Community growers have a preference over imported tobacco, and as a result only tobacco varieties, where production is surplus to Community processing demand, will be bought into intervention.

In the discussion of this year's package of reforms to the CAP, tobacco was accorded considerable priority on account of the high and rapidly rising budgetary costs of the regime. The principal aim of the recent adjustments in the intervention system is to reduce the subsidy cost by discouraging production in general, and, in particular, of varieties where demand has fallen significantly, especially the sun-dried oriental tobaccos.

Under the 1988 reforms, tobacco varieties produced in the Community have been divided into 5 groups ranging from the most in demand (Group I) to the least (Group V). There will be an overall limit on output qualifying for intervention buying or processing premia of 350 000 tonnes, with maximum quantities set for each variety according to demand conditions. If the maximum guaranteed quantity for any particular variety is exceeded, the prices and premia are to be reduced proportionately but by no more than 5 percent in 1988/89 and up to 10 percent in 1989/90.

It is hoped to reduce output by some 10 percent over the next three years. If in addition the varietal and quality mismatch can be reduced, storage costs and export refunds will be cut, further reducing the overall budgetary appropriation, though these savings will be to some extent offset by reduced tariff revenue.

Table 5.3

Production of tobacco in the Community and CAP appropriations

	1982/83	1985/86
Production		
000 tonnes	318.9(a)	350.7
Expenditure		
mill. ecu		
total	622.6	822.6
export refunds	17.3	32.1
intervention	605.3	790.5

Note a: average 1981/82

Source: Commission 1983, 1987b.

Since 1985 the varietal mismatch has worsened and intervention buying has increased. In 1985 28 000 tonnes, or 8 percent of output, of baled tobacco (particularly Greek Burley tobacco) were sent into intervention. Complete figures are not yet available for intervention buying in the 1986 harvest, but it appears that about 18 000 tonnes in Greece and 6 000 tonnes in Italy have been taken into intervention. This would amount to nearly 11 percent of the Community harvest, though apparently this figure may have been affected by the Chernobyl disaster. Tobacco remains a controversial sector in Community farm discussions, not least because of its importance to Greece, which receives 30 percent of all its Community agricultural receipts in the form of tobacco subsidies. As in Italy tobacco tends to be grown on very small farms (averaging less than 0.7 hectares), where diseconomies of small scale production contribute to the Community's lack of competitiveness vis-a-vis such producers as the United States, Malawi and Zimbabwe.

Possibilities of liberalisation of the Community tobacco market

For the purposes of our quantitative assessment we first consider the impact of tariff cuts for the GSP suppliers. Next we look at the impact of the new measures to bring about a switch in production so that the intervention buying and/or subsidised export of the surplus varieties is eliminated. Under the assumption that these policies are successful, we calculate the changes in the world prices of the the two sets of varieties and the implications for export earnings and welfare in the exporting countries. This policy will also reduce the costs to the CAP. The present cost of export subsidies reflects the much lower relative prices on the world for the inferior varieties of tobacco exported by the Community.

The Effects of Abolishing Tariffs on GSP Imports of Unmanufactured Tobacco

Only flue-dried, Burley and other high-value tobaccos (CT headings 2401 10 00 through 59, and 2401 20 00 through 59) are considered as these constitute the bulk (78.5 percent in 1985) of the value of Community imports. No significant substitution in production in the Community is likely, since the import price of these varieties will still be lower than the norm price, given existing policies.

The effective tariff rate on GSP imports is in practice the same as those on MFN imports. On MFN imports, the rate is 23 percent with a minimum of 28 ecu per 100 kilograms and a maximum of 30 ecu per 100 kilograms, whereas the rate on GSP imports is 6 percent but with the same maximum and minimum. In practice the 30 ecu per 100 kilogram maximum was effective for all MFN imports and all but small quantities of the GSP imports. The rate was assumed equal to 30 ecu per kilogram, equivalent to an average of 5.9 percent over the two years.

Table 5.4

Effects of eliminating tariffs on GSP imports of high-value tobaccos on the Community and on ACP, GSP and MFN exporters, (percent. of av. 1985-86 levels, except last column)

Direct effects:

	price(a) of impts/expts	volume of impts/expts	welfare as % initial trade	welfare ecu mill.
EC	-1.08	0.43	-0.99	-14.9
ACP	-1.08	-0.44	-1.08	-2.8
GSP	4.46	1.83	4.50	24.9
MFN	-1.08	-0.44	-1.02	-7.1

Indirect effects (b):

redistribution within LDCs	40.1
redistrib. from non-EC developed c'tries to LDCs	41.0
of which to ACP states	10.0
total gains to LDCs	63.1
of which to ACP states	7.2

Note a: import price inclusive of tariff
b: indirect effects based on 1985 trade data (UNCTAD, 1988).

The welfare loss to the Community is made up of a positive terms-of-trade gain of 16.3 million ecu and a tariff revenue loss of 31.1 million ecu. This analysis assumes that support to the Community tobacco producers is unchanged. Thus there would also be a reduction in the cost of supporting the Community farmers - mostly in the form of lower processing premia - equal to the value of production multiplied by the percentage increase in the world price. The rise in the world price is

calculated as 4.46 percent, so that, on the basis of 1985-86 average expenditure, this would have amounted to some 37.7 million ecu. While this is a gain to the Community budget, it is not a net gain to the Community as a whole since it represents a reduced redistribution of income from taxpayers to producers. Still at a time of budget austerity, this should be an appealing feature of the liberalisation of tariffs on tobacco, and on any other product where the Common Agricultural Policy regime guarantees prices to Community farmers.

From Table 5.4 it can be seen that the reduction in the EC price, in percentage terms equal to the price reduction experienced by the ACP and MFN exporters, is calculated as just over 1 percent. The volume of Community imports is calculated to rise by 0.43 percent (almost equal to the percentage falls in ACP and MFN exports because the assumed elasticities of export supply and import demand are very close). These are fairly modest changes. However the effects on the GSP suppliers are much more substantial, with a 4.5 percent rise in the GSP export price and a 1.8 percent rise in volume. The direct welfare gain to the GSP exporters is estimated at 4.5 percent of the value of initial exports or nearly 25 million ecu.

The country or intra-group distribution of gainers and losers from such a change is also of interest.

Table 5.5

Direct effects of eliminating tariffs on GSP imports of high-value tobaccos on the member states and on ACP, GSP and MFN exporters, (ecu mill., 1985/86 prices)

EC-10	16.27(a)	ACP	-2.79
of which		of which	
Germany	5.38	Zimbabwe	-1.51
France	0.45	Malawi	-1.06
Italy	1.41	Tanzania	-0.16
U.K.	4.05	Zambia	-0.05
Netherlands	2.82		
BLEU	0.96	GSP	24.89
Ireland	0.27	of which	
Denmark	0.80	Brazil	11.19
Greece	0.12	India	2.14
		Thailand	1.49
		Argentina	1.33
		MFN	-7.05
		of which	
		USA	-6.40

Note a: excluding tariff revenue losses. These are the potential terms-of-trade gains in each member state from permitting consumers to buy at the Community import price.

The relatively low gains to France, Italy and Greece stem from the low imports of tobacco from outside the Community of these countries, which is to some extent the result of their preference for "Oriental" tobaccos.

These are among the Community's surplus varieties. Here it should be noted that the potential welfare gains are based on each Member State's imports from outside the Community. Since there is intra-Community trade in tobacco, these data may not perfectly reflect consumption of tobacco imported from outside the Community.

As regards the impacts on the exporting developing countries, the direct losses incurred by the principal ACP exporters are relatively much smaller than the gains that would accrue to the major GSP exporters, were the tariffs on the latter's exports abolished. However these ACP losses in any event will be more than made up by gains from higher world prices for their exports on non-Community markets.

The net welfare impact on the developing countries from extending GSP benefits would be positive. But there would be a strong case for arguing that the United States (now a net importer) and other importing countries should grant similar GSP extensions, not as the Community proposal puts it "to share the burden" (the Community is in any event a net gainer), but because the gains to the developing countries would be deeper and more widely spread.

Eliminating Community Tobacco Intervention

Here the much more radical policy of establishing world prices in the Community, or effectively dismantling the tobacco regime, is investigated. The simulation compares the situation before and after the elimination of the intervention regime. The simulation does not consider the adjustment process per se. Since estimates of long-term equilibrium elasticities are used, the exercise simulates the situation which would prevail once equilibrium is restored to the markets within and outside the Community. In this simulation tariffs were preserved, and thus the small preference for the GSP suppliers and the much larger preference for the ACP states.

The base for the data is the average of the two years 1985 and 1986, years in which market prices for the higher quality flue- and air-cured varieties in the Community, that is world prices grossed up by the tariff, were above intervention prices, but market prices for the sun-dried oriental varieties were considerably below intervention prices. As a result considerable quantities were bought into intervention, the rest being sold to Community processors with the help of the premium.

In practice as intervention prices for both types of tobacco are abolished, or more plausibly gradually reduced, farmers in the Community switch to producing the flue- and air-cured varieties, reducing imports of these and exerting downward pressure on the world price. In the meantime less of the sun-cured Oriental varieties are now exported with restitution payments, so that the world price of these varieties tends to rise.

In order to keep the simulations as manageable as possible, the many varieties of tobacco, produced or imported, are divided into two groups that correspond to the those which the Commission is seeking to encourage

in the 1988 CAP reform package and those that it is trying to discourage.[6]

In fact there are as many as 34 separate varieties of tobacco for which separate guide prices and intervention prices are established. Clearly the mix of these in consumption, production, imports and exports differs so that taking weighted averages for prices of the two groups will create a problem in defining alignment of Community to world prices. Hence we have used the prices of two important and typical varieties in each group as representative of the whole group. These varieties are Virginia ESP among the favoured groups and Kaba Koulak classic among the less favoured.

The simulation results give a 22 percent rise in the world price of the representative lower quality variety and a similar fall in the price obtainable by farmers in the Community. The assumptions about elasticities lead to the result that the price of the higher quality Virginia ends up almost unchanged, the reduction in output in the rest of the world as farmers switch to the now higher-priced Orientals, offsetting the switch to higher quality in the Community. Of course it is fortuitous that they offset one another almost exactly.

Various alternative assumptions on cross-price elasticities of supply, both in and outside the Community, were tried. It was found that the production and net export mix was sensitive to the assumptions but the equilibrium prices were not much affected. The reason for this is the low direct and cross-price elasticities of demand which mean that world output of each quality of tobacco will not vary much, even where the production mix in the Community alters radically.

Community output of the higher quality tobaccos rises 2.8 percent while that of the lower quality falls almost 15 percent. Imports of the higher quality varieties rise marginally as some smokers switch toward them,

---

[6] The distinction between higher and lower quality tobaccos follows the headings of the Common Customs Tariff. The higher quality tobaccos cover Virginia-type, light air-cured Burley and Maryland and fire-cured varieties. These correspond to Nimexe codes 2401.02 to 2401.59 and 2401.71 to 2401.76. Tobacco refuse, 2401.80, was included in the higher quality category. The lower quality varieties were taken as those under Nimexe codes 2401.61 to 2401.69 and 2401.77 and 2401.78. These consist of other light air-cured and sun-cured varieties, preponderantly the so-called Oriental tobaccos.

For setting prices and thresholds the Commission does not use this classification. However the higher quality tobaccos correspond fairly closely with the three groups of varieties, for which the Commission has proposed relatively favourable treatment in the 1988 price fixing. These are characterised as (i) "commercially sought-after varieties", (ii) "varieties experiencing temporary difficulties" and (iii) "varieties well suited to demand from Community industry". Our lower quality class corresponds largely to (iv) "varieties which have unreliable external market outlets and which are partly sent into intervention" and (v) "varieties undergoing a sharp increase in production, which are exported at low prices onto difficult markets in non-member countries".

while exports of the lower quality, now no longer subsidised fall almost 8 percent.

Table 5.6

Results of eliminating tobacco intervention in the Community: effects on world and Community prices, Community production and net exports

representative varieties	Virginia ESP	Kaba Koulak
prices: ecu/kg		
initial world prices	5.12	3.41
EC intervention prices	5.11	5.43(a)
final world/EC prices	5.13	4.16
EC output, 000 tons	Higher quality	Lower quality
initial	261.5	132.9
final	268.7	113.3
percent change	2.8	-14.8
EC net exports, 000 tons		
initial	-341.6	51.3
final	-344.5	47.3
percent change	0.9	-7.7

EC total trade, ecu mill.	imports	exports	balance
initial	1829.2	224.8	1604.4
final	1874.5	179.2	1695.2
percent change	2.5	-20.3	

The last panel of Table 5.6 is calculated by applying the import and export price and volume changes for the two different quality groups individually to average 1985/86 trade flows for each Nimexe category. When this is done the percentage impacts on exports and imports are somewhat modified, because there are some limited exports of higher quality and imports of lower quality varieties. The net result is that import values rise 2.5 percent, of which almost all derives from the 22 percent world price increase in lower quality tobacco. Export values fall 20 percent, that is 5 percent in volume and 16 percent in price.

The implications of these findings for the tobacco exporting countries in the rest of the world are, firstly, that the liberalisation of the Community market would result in higher prices for lower quality varieties and little change in prices for higher quality varieties. This would be a net benefit to the developing countries as a whole, and a net loss to the developed world.

Secondly the reduction in Community exports of lower quality tobaccos would benefit the exporters of these varieties, in particular Turkey and Yugoslavia in Europe and certain North African and Middle East countries.

As regards the Community there will be a small welfare gain resulting from the lower prices of the lower quality tobaccos, though as we have seen they are no longer much in demand. There will be a producer loss to the farmers growing these varieties, though in the simulation the output only falls about 15 percent and there is some switching into the higher qualities. There will be a small balance of payments loss (91 million ecu), and considerable savings to the Common Agricultural Policy budget. In 1985/86 on average 32 million ecu were spent on export refunds and 790.5 million ecu on intervention. Since then these costs have been growing.

There are a number of possible policy changes that fall short of full liberalisation. Guide and intervention prices could be reduced rather than eliminated. However this simulation demonstrates that full liberalisation is in fact a viable option. Certainly there are some farmers who will be unable to produce profitably any Oriental tobacco were prices to drop 23 percent. In Apulia, and particularly in the province of Lecce, the climatic and geo-pedological conditions - insufficient rainfall, lack of irrigation possibilities and the infertility of the land - are such as to make switching to other varieties of tobacco or to vegetables, flowers or fruit unfeasible, though this is not the case in the other principal growing area, the Abruzzi (Commission, 1980).

CHAPTER 6

RICE

Statistics on world rice production are given in Table 6.1. It is clear from these figures that there has been a major increase in output in Asia, and in particular in China, Indonesia and Vietnam.

Table 6.1

World production of paddy rice (million tonnes)

	1976-80 av.	1984	1985	1986	1987 (est.)
Bangladesh	19.3	21.6	22.6	23.3	21.1
China (PR)	135.0	178.3	168.5	172.0	173.0
India	73.2	87.5	96.2	90.0	73.0
Indonesia	25.7	38.1	39.0	39.3	38.5
Japan	15.0	14.8	14.6	14.4	13.2
Thailand	15.9	19.9	20.1	18.9	16.5
Vietnam	11.1	15.6	15.9	16.2	15.0
other	48.4	56.2	57.3	59.0	56.0
Total Asia	343.6	430.0	434.2	433.1	406.3
Brazil	8.6	9.0	9.0	10.4	10.7
United States	5.7	6.1	6.1	6.1	5.9
other	17.8	22.8	21.1	20.9	19.1
EC-12	1.6	1.7	2.0	1.9	1.9
World	377.3	469.6	472.4	472.4	445.9

Note: figures for 1987 are estimates

Sources: Eurostat; USDA 1987b.

The share of rice in world agricultural output in 1980 has been estimated at 11.5 percent (though the calculation of this number is clearly fraught with enormous valuation problems). The share in the developed market economies was only 4.2 percent (32.8 percent in Japan but 2.2 percent in the United States), while that in the developing countries was 26.0 percent, roughly twice that of either wheat or coarse grains. The share of rice in grain output for the world as a whole is estimated at 31.7 percent, 15.5 percent for the developed economies and 48.3 percent for the developing economies (all figures from Tyers and Anderson, 1986, based on FAO and USDA tapes).

However, according to the same source, rice only accounted for some 5.8 percent of total world exports of grains on average in the period

1980-83, down from 6.1 percent in 1970-74 and 7.9 percent in 1961-64. World trade in rice is then a very small proportion of output.

A second significant feature of the world rice market is the high degree of protection in all the major and most of the smaller markets. As the table of PSEs calculated by the OECD and the USDA demonstrates, while the European Community clearly gives the

Table 6.2

Producer subsidy equivalents for rice in selected countries, 1982-86, percent

	1982	1983	1984	1985	1986
EC-10	29.5	181.7	83.3	256.8	315.9
United States	23.8	46.4	31.9	52.2	71.7
Japan	84.8	87.8	87.3	86.7	94.3
Australia	17.6	14.2	7.0	12.9	21.8
Brazil	39.6	53.2	34.1	56.0	64.2
Nigeria	-47.8	-56.1	-53.3	-35.5	-22.9
India	-39.6	-18.2	-12.0	-17.0	-4.9
Indonesia	22.8	1.4	9.7	17.8	19.7
Pakistan	-47.8	-56.1	-53.3	-35.5	-22.9
South Korea	66.7	71.3	71.7	72.4	76.6
Taiwan	25.1	25.9	32.1	26.9	31.5
Thailand	-0.3	0.4	1.1	1.8	4.3

Source: USDA, 1988b.

biggest subsidies to its (rather few) rice farmers, substantial subsidies are given by the United States, Japan, Australia, Brazil, Indonesia, South Korea and Taiwan, while two major producers, Nigeria and Pakistan, impose significant taxes on their rice farmers. It is interesting that there is no clear relation between being a net exporter or importer and whether rice farmers are subsidised or taxed. Of the countries listed, Australia, the United States, Pakistan and Thailand are significant net exporters. Brazil, Nigeria and South Korea are major importers.

An implication of the small proportion of production which enters international trade, together with the high degree of producer protection in most of the major producing countries, is that the world price is very sensitive to small changes in supply, or, more precisely, shifts in the export supply schedules. Such shifts may be caused by climatic variations or by changes in subsidy regimes.

The major United States support programmes consist of deficiency payments for farmers participating in acreage reductions, and the special rice marketing loan scheme under the 1985 Farm Bill, which allows repayment of loans on production at levels below the loan rate and related to the

world price. Both of these may have given an impact on world price levels, the former in an upward direction because it encourages the withdrawal of land from rice production, and the latter, downwards, because it enables farm incomes to be maintained without a rise in the loan rate (which is effectively an intervention price).

However the greatest impact has come through reductions in the U.S. loan rate itself. This has been decreased from an average of $8.14 per cwt. in 1982 to $6.84 in 1987. Secondly last year the United States used the Export Enhancement Program to sell 70,000 tonnes to Turkey and 60,000 tonnes to Jordan, effectively undercutting world prices.

Japan also has an area-reduction programme. In the course of 3 years 35 percent of acreage under rice is to be converted to other crops.

However, with increased supplies in, notably, China and South East Asia, and self-sufficiency being reached in several traditional importing countries, and the impact of U.S. subsidies, world prices have fallen steadily over the last five years, only picking up towards the end of 1987 in response to tighter world supply. On average in 1987 prices were 18 percent below their average 1980-82 level. Sharp reductions of output have taken place in India and certain countries of South-East Asia because of drought, and in Bangladesh because of flooding. There has also been some reduction in plantings in Australia, Argentina and Uruguay, related to the low level of world prices (USDA 1987b).

But these improved prices cannot be expected to last. When prices revert to trend, less efficient producers, where they face world prices or, worse, suffer negative PSEs, will again find themselves being increasingly squeezed out of the market. Farmers in Nigeria would be unable to compete with United States rice even without its PSE or their own negative PSE. In 1986 it cost the average farmer in the United States $ 368 to produce one tonne against $ 635 in Nigeria (at 1986 exchange rates). The American farmer received a subsidy of $ 246 per tonne. The Nigerian farmer paid a tax or negative subsidy equivalent to $ 186 per tonne.

Some countries, such as Thailand, have cut prices and raised production to try and maintain earnings. At the same time Thailand is reducing acreage under a four-year programme. Others have resorted to ever-higher producer subsidies.

EC Market Organisation for Rice

The price and intervention system for rice within the Common Agricultural Policy is in all important respects the same as that of the other cereals, wheat, barley and maize. It follows the archetypal CAP system introduced in 1962, a system effectively unchanged but for one important respect.

Originally the guaranteed price system applied to unlimited quantities of production. Now for most goods, thresholds have been introduced which limit the full intervention price to a quantity usually based on historical levels of production. However rice has so far escaped the introduction of these "stabilisers" on the grounds that production is

fairly stable and the regime is relatively inexpensive when viewed as a share of CAP spending (0.42 percent of appropriations in 1986 and 0.41 percent in 1987) (Commission 1988 b).

Not that many would argue that the Community has a comparative advantage in the production of rice. Furthermore the rice grown in the Community, mainly in the Po valley of Italy, is less and less in demand and is mostly exported to North Africa, with the help of substantial "restitutions" to bring the price down to the world level.

The Community subsidy system involves three types of price: target, intervention and threshold. The intervention price is the price at which the intervention agencies are required to buy all the rice offered to them by Community farmers. In 1986-87 it was 314 ecu/tonne, unchanged from 1985-86. It is the same for both round-grain and long-grain varieties, and so in itself does not give any inducement for farmers to switch to varieties most in demand. Monthly increases are applied to the intervention (and also to the target and threshold) price to ensure a smooth flow of supplies over the year following the harvest (OECD 1987b, 66- 69).

Threshold prices are set for husked rice, milled rice and broken rice. They are used to ensure preference for Community-produced rice. An import levy is based on the difference between the highest world price and the threshold price, such that when transport costs and a trading mark-up are included, the imported rice should be more expensive. For 1986/87 the threshold price was set at 541.63 ecu. This may be compared to an average cif price at Rotterdam of about 182 ecu/tonne for American long-grain husked rice, though world prices were particularly low over the 1986/87 marketing year.

There is also a small levy on semi-milled and milled rice designed to protect the European Community milling industry. This amounted to about 7 ecu/tonne on wholly milled rice in 1987.

Preference is given the ACP countries through a reduction in the variable levy of 50 percent plus 3.6 ecu/tonne on paddy and husked rice and through a reduction of 50 percent plus 5.4 ecu/tonne on milled rice. In addition for milled rice ACP states are exonerated the "amount for the protection of the industry". For example by a Commission regulation of 8 May 1987 the ACP levy on round-grain paddy and husked rice was set to 173.57 ecu/tonne as opposed to the third country levy of 354.34 ecu/tonne. For milled long-grain rice they were 731.09 ecu and 353.19 ecu respectively.

Table 6.3

EC import levies on rice as percent of import price (cif) and export refunds as percent of consumer price

	1982	1983	1984	1985	1986
import levies	29.2	23.1	43.1	58.3	73.1
export refunds	9.6	6.8	11.1	13.0	n.a.

Sources: USDA 1988b.

The rise in the rate of Community protection to rice production is evident from the table. The reasons for the steady increase have been the falling real price of rice on the world market and the policy of real income increases for Community producers. The increases in yields in the Community have aggravated the problem since these increases have not been achieved by farmers in all areas, with the result that prices have largely had to reflect the costs of the least efficient producers. Between 1973 and 1986 yields rose 27 percent in Greece, 30 percent in Italy and 60 percent in France.

Table 6.4

Community balance in rice, 1985-86, '000 tonnes milled rice equivalent

	1983/84	1984/85	1985/86
Production	945	1056	1230
Change in stocks	-45	-11	-35
Imports	681	878	780
Exports	359	505	562
Internal use	1421	1437	1482
of which human consumption	1214	1247	1266
Self-sufficiency ratio	66.5	73.5	83.0

Source: Commission 1988a.

The impact of the Common Agricultural Policy rice regime together with the increases in production yields in shown in Table 6.4. Production has climbed although consumption has remained broadly stable. As a result self-sufficiency has appeared to increase. However since production has been of the round-grain varieties and consumption principally and increasingly of the Indica varieties, the Commission self-sufficiency statistics are misleading. Exports have had to rise - implying a growing restitution burden for the Common Agricultural Policy budget.

The Community Rice Conversion Policy

Last year (1987) the United States claimed that the European Community had broken the standstill commitment under which ministers had agreed not to introduce new protective measures while the Uruguay Round was in progress. The policy in question was the subsidy designed to encourage farmers to convert from round-grain (Japonica) rice to long-grain (Indica) varieties.

At the moment the Community exports most of its production of round-grain rice, and imports long-grain from, in order of importance,

the United States, Thailand, Surinam, Australia and India.[7] Japonica varieties have been grown in Italy, at least since the days of the Roman empire.[8] They absorb more water in cooking and are suitable for risottos and puddings. However the trend in demand has long been towards the drier Indica varieties (which confusingly include a number of short-grain varieties).

In defence of the rice conversion policy, the Commission argued that it was both limited in scope and scheduled to last only 3 to 5 years. Indeed the land and climatic conditions in Italy which are suitable for Indica varieties are strictly limited.

The purpose of the conversion scheme is to encourage farmers to switch from Japonica to Indica varieties. The means is through a financial inducement of 330 ecu/hectare, but without any discrimination in guaranteed prices between varieties. To the extent this is successful, and climatic and soil conditions are the principal technical limiting factors, the CAP budget will gain once the incentive payments are made.

Even if imports and exports diminish by the same volume, the savings on subsidies on the export of the Japonica varieties will be considerably less than offset by the loss of revenue from the levies on imports of Indica rice, because of the disparity in world prices. Using 1985 levies and intervention prices, if 50 percent of imports were replaced by Community production of long-grain rice, the Community budget would gain on the trade side by 203.19 ecu/tonne on export subsidies less 83.29 ecu/tonne on import levies, or by a total of about 47 million ecu on the basis of 1986 trade data. Since world prices have diminished since 1985, the savings will also have come down.

Against these savings must be set the approximately 235 million ecu of incentive payments, though this should be a once-and-for- all expenditure. World prices are not likely to be much affected since Community trade is a relatively small part of world trade.

However the brunt of the reduction in imports of long-grain rice is likely to be borne by the MFN suppliers, that is principally the United States. In the event of a reduction in Community imports of about 50 percent, the MFN suppliers could be squeezed out of the Community market entirely.

The net gains from the policy could, then, be savings of less than 50 million ecu per year at the expense of a 235 million ecu capital expenditure and considerable friction with the United States. There would be little impact on, and certainly no gains, for the GSP or ACP suppliers.

---

[7] Confusingly in the trade statistics these are largely labelled "long-grain" since the NIMEXE classification only takes the ratio of length to width into account, and not the variety.

[8] However it was the Carthusian monks of the Certosa of Pavia, founded in 1396, who soon thereafter developed the present system of controlled flooding of the paddy fields.

Rice Policy in General

Currently there does not appear to be any clear medium-term policy for rice as a whole. It would be relatively easy to persuade farmers to switch from rice to other grains by adjusting the relative returns. (Land that can support rice can support a wide range of cereals, though the inverse is not necessarily true. In the Po valley farmers would generally switch to maize.) However with the current excess supply in wheat and coarse grains this is not in contention. The subsidies for rice absorb relatively little money in relation to other CAP regimes. Appropriations in 1986 were 93,700 ecu and in 1987 95,000 ecu, most of which take the form of export subsidies. In 1987 the cost of the grain sector was 3.7 million ecu.

The area under cultivation has been very constant. In the 12 member states 220,000 hectares were under rice in 1986, of which 193,000 were in Italy. In 1973 the numbers were 225,000 and 190,000 respectively. Yields, as we have seen, have risen significantly, so that production in EC-12 was 1.265 million tonnes in 1986 as against 975 thousand tonnes in 1973.

The Community preference is to let sleeping dogs lie. Since the United States is the most important external supplier, it may seem unwise to trigger a trade dispute over what is, to the Community, a relatively minor commodity. The reaction to the conversion premium seems to have been unforeseen (and, in any event, was probably set off by the refusal of the Community to accept a GATT procedure over the soybean dispute.) However the fact that the Community is a minor producer of rice and that few farmers depend upon it, is in itself an argument for considering the impact of liberalisation on the supplying countries.

Estimates of the Effects of Eliminating EC Protection in Rice

A number of studies have looked at the effects of a liberalisation of the European Community rice regime. The several studies using the Tyers model (Tyers, 1985, Tyers and Anderson 1986, 1987a, 1987b) explicitly model the inter-relationships between different agricultural sectors.

In principle it is important to capture the cross-price effects of policy changes in one sector on the supply and demand schedules for other commodities. In the Community grain sector a reduction in rice output will lead to increases in the production of wheat and coarse grains and possibly have minor impacts on other crops and meat production. Changes in the price of rice to the consumer will lead to changes in demand for substitutable cereals, particularly wheat. The elasticity of substitution is however likely to be low. Tyers (1985) suggests, for the Community, 0.8 for the elasticity of wheat demand and 0.1 for the elasticity of coarse grain demand, both with respect to the price of rice. Both these seem excessively high, given the relatively low level of rice consumption, and that the own-price elasticity is assumed to be -0.5. On the other hand Tyers sets the cross-price elasticities of supply of wheat and coarse grains with respect to the price of rice at zero. One would expect that a reduction in rice acreage would lead to some increase in acreage devoted to other cereals, and so small but non-zero elasticities.

Important though these inter-relationships are in principle, in practice rice output is such a minor part of total grains output in the Community, while the consumption share is almost as small, that changes in the CAP rice regime are unlikely to add significantly to existing CAP oversupply problems or to provide solutions to them. In 1986 rice contributed 0.3 percent of EC-10 final agricultural production, against 12.0 percent for other grains. In the largest rice producing member state, Italy, the corresponding figures were 1.1 percent and 11.4 percent respectively. In 1985 rice took 0.2 percent of the UAA (utilised agricultural area) in the Community of 12, and 1.1 percent in Italy.

Table 6.5

Impact of the liberalisation of the CAP on trade and world prices of rice: results from prior studies

Study base year	EC concept	net EC imports	net DME imports	net LDC imports	world price	variability of world pr
		- million tonnes -			percent	percent (a)
Valdes and Zietz (1980)						
1975/77	EC-9			-0.1 b		
Anderson and Tyers (1984)						
1980	EC-9				5.0	12.1
Tyers and Anderson (1986)						
1980	EC-10	0.1	0.1	-0.1	0.7	9.6
Matthews (1985)						
1978-82	EC-10				0.1	
Tyers and Anderson (1987a and 1987b)						
1980/82	EC-12	-	5.6	-2.9	3	15.8
1988/90	EC-12				9	

Note a: percent share of variability of world price due to CAP
b: milled rice. The authors give a dollar amount. This has been converted at $ 190 per tonne

Sources: as in table.

Table 6.5 summarises the effects of total liberalisation of the Community rice market. The most recent Tyers and Anderson paper indicates how much greater the effects of liberalisation have be- come, as protection has intensified, since their original study based on 1980-82 data.

Although it is important to know the impact of full liberalisation, it is also crucial to consider some more modest policy moves, which are both politically feasible, could be agreed and implemented in a relatively short period of time (and ideally form part of the Tropical Products package to be agreed at Montreal) and, most important, would have more than a token impact on the third world. It is for this reason that we decided to simulate the impact of eliminating variable levies on Community imports of rice.

The Effect of Eliminating Levies on Long-grain Rice

Table 6.6 shows the levels and shares of imports of the three principal sorts of long-grain rice from the MFN, GSP and ACP suppliers. As has been pointed out, the NIMEXE classification does not follow varieties (of which in the case of rice there are many thousands). The distinction between round-grain and long-grain in the trade data does not coincide with the conventional broad grouping into Japonica and Indica varieties, but merely reflects the average length-to-breadth ratio of the kernel. We have only taken imports classified as long-grain and as broken. These ac- count for 66 percent of imports in 1986 from outside the Community of rice other than for sowing. It can be seen that each category of supplier is effectively dominated by one country, the United States in the MFN group, Thailand in the GSP group and Surinam among the ACP states.

Table 6.6

EC imports of long-grain rice, 1985/86 average, mill. ecu or percent

	paddy and husked	milled semi-milled	broken	total
Value mill. ecu	221.7	49.7	28.4	299.9
Shares percent				
MFN	52.7	11.8	15.0	42.3
of which United States	48.7	11.5	-	37.9
GSP	27.4	85.2	71.0	41.1
of which Thailand	18.1	62.9	65.9	30.1
ACP	20.0	2.8	9.6	16.1
of which Surinam	18.0	2.8	6.3	14.4
Centrally Planned	-	0.2	4.4	0.5

Source: Eurostat Comext.

In the case of the MFN suppliers the significance of the United States is even greater than the table indicates, since other suppliers include Austria and Finland which may well have obtained their supplies from the United States. Other producing countries which account for some of the MFN share are Spain (not included in the Community for our purposes), Taiwan (excluded from the GSP group for political convenience) and Australia.

The basic assumption underlying two simulations of the suppression of the variable levies was that the internal Community rice regime would continue much as before. Farmers would continue to sell directly to the market or into intervention in unlimited quantities, and surplus short-grain rice would continue to be sold to third countries with subsidies to bring the price down to Community level. The price paid by consumers would, however, be the world price (after adjustments for transport costs etc.) The rice that was produced and consumed in the Community, a relatively small proportion of Community output, could be brought down to the world price by providing premia to wholesalers or millers, much in the same way as premia are paid to vegetable oil-crushers. Indeed to maintain the much cherished principle of Community preference, the premia could be such as to make Community grown long-grain rice somewhat more attractive than imports.

The simulations are conservative in that only levies on long-grained rice are suppressed. Thus the problem of bringing the price of competitive Community-produced rice down to the world level is minimised, since Community production of these varieties only accounts for about 15 percent of total tonnage.

Two alternative simulations are reported, the first involving the abolition of the levies across the board and the second abolishing them only for the GSP and ACP countries. The latter simulation is consistent with the FAO Intergovernmental Group on Rice recommendation that, inter alia, "developed countries should make all efforts to implement, improve and enlarge GSP schemes for rice", and thus should not be seen as an aggressive trade action. (FAO, 1987c)

The first point to be made about the results reported in Table 6.7 is that they are significant to all the parties involved. The reductions in the EC internal prices are substantial, particularly, of course, where import levies are abolished across the board. These price reductions stem from the high level of the levies, rather from any arguable assumptions about the demand or supply elasticities. (The assumptions about elasticities are explained in Appendix 2.)

The impact on Community imports is of course directly determined by the elasticity of Community demand. Here a demand elasticity of -0.5 is taken. The gainers from the surge in imports are, in Simulation 1. largely the United States, the principal MFN ex- porter of paddy and husked rice. The reason why the GSP suppliers do not increase their exports in the first simulation is that it is assumed that (i) the United States is the marginal supplier, with an infinite elasticity of supply at the world price, and (ii) the Community fits into the "small country" model of importer.

The justification for the assumption that the United States is the marginal supplier lies in U.S. agricultural policy. The loan rate system means that U.S. farmers have had no incentive to put their output on the market until the loan rate (or price) is reached. When a Commodity Credit Corporation (C.C.C.) non- recourse commodity loan matures, farmers may opt to forfeit the commodity rather than repay the loan with interest and receive the prevailing market price.

Table 6.7

Effects of the suppression of variable import levies on long-grained rice, mill. ecu and percent

	all levies suppressed		levies on GSP and ACP countries suppressed	
	PDR (a)	milled (b)	PDR	milled
average levy 1985/86, percent				
MFN, GSP suppliers	66	162	66	162
ACP suppliers	32	78	32	78
internal EC prices, percent	-39.6	-61.8	-13.8	-58.1
EC imports, percent				
total	19.8	30.9	6.9	29.0
MFN	40.6	30.9	-100.0	-100.0
GSP	0.0	0.0	213.6	48.3
ACP	-7.9	-12.9	5.7	-10.3
welfare effects, percent of initial trade				
EC consumer gain	43.6	71.3	14.3	33.1
loss of levies	39.6	61.7	13.9	28.9
net EC welfare gain	3.9	9.5	0.5	4.2
MFN	0	0	0	0
GSP	0	0	88.3	12.0
ACP	-17.0	-30.0	14.7	-24.3
foreign exchange effects mill. ecu				
EC	-40.9	-14.8	-110.6	-20.2
MFN	53.2	15.6	-121.0	-5.9
GSP	0	0	222.9	26.6
ACP	-12.3	-0.6	8.1	-0.5

Note a: paddy and husked
b: and semi-milled.

Since U.S. farmers are also the largest source of supply, in the in the medium-term, the loan rate has tended to put an upper limit on the world price.In the short term, the world price was and is also affected by the U.S. governments disposal of its rice stocks, either through the Export Enhancement Program (which uses these stocks as a subsidy for buyers in selected developing countries) or, as aid, through PL 480, Section 416 of the 1949 Act or through the C.C.C export credit programs. However since the 1986 crop, loan repayments may be made at below the loan rate. In 1987/88 they may be made a the lesser of the loan rate or the higher of 50 percent of the loan rate or the prevailing world market price.

This means that the loan rate will no longer tend to act as an upper limit to the world price, but it reinforces the argument that the elasticity of American exports is effectively infinite at the world price.

The small country assumption is also made, that is that changes in Community demand do not effect the world price. In fact on average in the two years Community imports of rice accounted for only 11 percent of world trade (USDA, 1987b) and a minuscule share of world output. One study listed in Table 6.5 suggests that the effect of Community policy as a whole on the world price may be to lower it by as much as 9 percent. However this result stems from simulating the complete liberalisation of the EC rice market (and all other agricultural markets). In our more restricted simulation, the policy stays intact - and with it subsidised sales of round-grain rice onto the world market - and the only direct impact on world prices will be through increased imports of long-grain rice. These increased imports only take the Community from 11 percent of world imports to 13 percent in the first simulation or 11.8 percent in the second simulation. In neither case is there likely to be a significant upward pressure on world prices.

The ACP suppliers lose Community export share and suffer welfare losses in the first simulation because their preference is eroded. Since Surinam is the major ACP rice exporter, it bears the brunt and, indeed, as much as 12 million ecu of the ACP 12.9 million ecu loss in foreign exchange earnings.

In the second simulation where the levy is eliminated only on GSP and ACP imports, these countries clearly gain considerably more. Indeed the Community would stop importing rice from the MFN sup- pliers altogether, since though the price of GSP and ACP rice rise substantially (in fact by 42.7 percent for paddy and husked), it is still cheaper than the MFN rice which is liable for the levy of 66 percent or more.

It is certainly a good example of a Pareto-desirable change, because there is no welfare cost to the MFN countries (since their supply curve is horizontal) and all the other players enjoy net welfare gains. The exception is the case of the ACP countries with the considerably less important milled rice. In that case the loss of levy-preference outweighs the gains from market growth. Taking the two categories of rice together, the ACP in- crease foreign exchange earnings by 8.2 million ecu of which Surinam would receive 7.6 million ecu if it held its export share within the ACP bloc. Eliminating levies clearly would have an impact on the Common Agricultural Policy budget. Under the assumption that Community rice growers continued to be subsidised as at present, the main budgetary impact will be through the loss in levies. These are estimated at 101.3 million ecu in simulation 1 and 42.8 million ecu in simulation 2, or 0.48 percent and 0.20 percent of CAP guarantee expenditure on average in 1985 and 1986. The gain to the consumers in all cases exceeds the loss to the CAP budget.

Another worry might be the impact of much cheaper rice on the demand for other cereals. If the increased consumption of long-grained rice implies an equal reduction in the consumption (in tonnes) of other cereals, demand for other cereals would be reduced by some 35,000 tonnes, which is equivalent to .03 percent of Community grain production (excluding

rice). If that were all reflected in a fall in durum wheat demand (the most high-priced of the cereals), and it meant a similar quantity had to be bought into intervention, the additional CAP budgetary cost would have been merely 9.15 million ecu, using 1985-86 average intervention prices.

Of course this is a maximalist assumption. It is unlikely that the demand for other grains would fall as much as that of rice increases, so the effect on the costs of intervention buying in grains is likely to be very small indeed.

Finally it should be stressed that the gains available to the developing countries from an extension of the GSP to include freedom from import levies on rice would now be considerably greater than those estimated on the basis of 1985/86 data. With the fall in the world rice price in 1987, levies rose to levels well above those of the previous two years. In May 1987 the third country levy on long grain paddy was fixed at 381.94 ecu. This was over 350 percent of world prices or over 75 percent of the prices received by Community growers.

CHAPTER 7

CASSAVA[9]

Table 7.1

World exports and imports of cassava, by weight of chips and pellets ('000 tonne)

	1981-83	1984	1985	1986a
Exports				
Developing countries	7300	7180	8130	7400
of which				
Latin America	20	20	20	20
Asia	7150	7160	8110	7380
of which				
China	450	70	100	300
Indonesia	280	400	600	500
Thailand	6540	6690	7410	6600
Imports				
World	7300	6400	9000	7400
Developing countries	500	600	1000	770
of which				
Asia	450	540	950	750
Developed countries	6800	5800	8000	6630
of which				
Eastern Europe	190	100	400	300
Israel	-	30	150	70
Japan	120	240	650	300
United States	50	70	70	60
EC-12	6430	5310	6730	5900

Note a: estimates

Source: GATT Secretariat, based on FAO data; Eurostat Comext.

The Community accounts for the bulk of world trade in cassava, and in doing so, the Community trade policy on that commodity effectively

---

[9] The tuber, manihot esculenta Crantz, is generally known in English-speaking academic circles and in Africa as "cassava", the Dutch term, and as "tapioca" when prepared in pellet form for human consumption. In Malaya and Thailand the crude tuber is known as "tapioca", but to Indonesians, speaking English, as "cassava". Dried cassava imported into Europe is known as "manioc" (in English and French, "maniok" in German, "yuca" in Spanish) and is so listed in EC statistics (Nelson, 1983).

determines its world price. With protection on cereals in the Community at rates, measured by PSEs, averaging about 90 percent, there has been considerable incentive to find new cheaper sources of animal feedstuffs. Cassava was found to provide an excellent substitute when mixed with soybean or other oilseed cake or meal (protein-rich, whereas cassava is almost entirely starch or carbohydrate) in the ratio of about 4:1, the exact mix depending on whether the feed was to be used for pigs or for cattle and on the protein content of the meal (Sathirathai and Siamwalla, 1987; Nelson, 1983). This mixture is then compounded with feed grains, with a maximum of 40 percent cassava in pig rations, 25 percent in cattle rations and 15 percent in poultry rations. (In grains the protein content is roughly 10 percent.)

In the choice of raw materials to obtain balanced feed compounds, costs are minimised (through linear programming), given the prevailing market prices and subject to the requirement of a ration of a particular nutritional value. Starch, protein, minerals, vitamins and various trace elements can be found in the form of naturally balanced compounds, as are cereals, and/or as separate components such as oilmeal, cassava, the various gluten feeds (protein), citrus peel (starch) and so on.

In 1972/73, cereals accounted for more than 62 percent of the energy (starch) content of concentrate feeds (that is excluding roughage, pasturing, hay, silage etc. which still account for about 55 percent of all animal feed) (Commission, 1987a). The cereals proportion had fallen to 51.6 percent by 1984/85. Over the same period the share accounted for by cassava rose from 1.5 percent to 4.4 percent by 1981/82 but, with the introduction of import quotas, has since stabilised at about that level. The share of oilseed cake and meal increased from 12 percent in 1972/73 to nearly 17 percent in 1984/85.

Table 7.2

European Community imports of grain substitutes, 1974 to 1986, mill. tonnes

		EC-10			EC-12
	1974	1982	1984	1986	1986
Cassava	2.1	8.1	5.3	5.1	5.9
Corn gluten feed	0.7	2.8	3.7	3.7	4.1
Citrus peel	0.3	1.3	1.3	1.2	1.2

Source: Commission, 1987a, 33.

Besides cassava a number of industrial by-products have been found useful as cheap cereal and/or oilseed meal substitutes. Of these the most important are corn gluten feed and citrus peel, though maize and rice bran, molasses, maize germ cake, grape must and other fruit waste are also used, as are certain agricultural commodities grown primarily for other purposes, such as beet pulp and brewer's grains.

Table 7.3 gives a broad breakdown of ingredients of marketable feeds.

Table 7.3

Animal consumption of marketable feeds, percent shares

	1975	1980	1985
Cereals	61	54	51
Cereal substitutes	5	9	11
of which cassava	3.8	4.4	4.3
Oilmeal and cake	13	17	17
other	21	20	21

Source: ibid., 169; House of Lords (1988).

Initially the sources for cassava were Brazil and Indonesia, though Thailand, with comparative advantage in its transport system, doubled production every three to four years between 1967 and 1982. By 1980-82 Thailand supplied 87 percent of Community imports, while China, which only had begun exporting in 1979, supplied a further 9 percent.

The Netherlands, Belgium and Germany were the main importing countries in the Community, since their green exchange rates tended to be lower than their official rates, giving cassava an additional price advantage against feedgrains. Also transport costs are an important factor and help explain the concentration of the use of cassava in the southern half of the Netherlands, the northern half of Belgium and the German region bordering the Netherlands, all of which are supplied from the Rotterdam, Amsterdam and Antwerp port complex, and northern Germany near the ports of Bremen and Hamburg. France and Italy were at a cost disadvantage and demanded trade restraints. (Sathirathai and Siam-walla, 1987, 597)

In 1982 the Community entered a "voluntary export restraint" agreement with Thailand. Under the agreement, Thailand issues ex- port licences up to a maximum of a certain tonnage each year, and, on the basis of these, the Community will issue import licences. Under the agreement the Community undertook to provide assistance for rural development and crop diversification.[10]

---

[10] Sathirathai and Siamwalla discuss certain questionable aspects of the extension of the treaty after December 1986. In particular the fact that the EC took advantage of the fact that Thailand was not yet a GATT member, so as to deny the applicability of Article XIII(2) (nondiscriminatory treatment of quantitative restrictions) while threatening the use of Article XXXV (non-applicability of specific GATT obligations) and a more restrictive agreement if they were to delay signing. The authors make a number of further criticisms of the Community's interpretation of its obligations under the GATT and at Thailand's reluctance to insist on its rights under GATT provisions, which they attribute to an insufficient understanding of how the GATT procedures work as well as the abstruseness of the GATT itself.

Table 7.4

Community (EC-10) import quotas and actual imports of cassava (a) 1983 - 1988, (million tonnes)

	1983	1984	1985	1986	1987	1988
Thailand						
Quota	5.0	5.0	4.5 b	4.5 b	5.5 c	5.5 c
Imports	4.40	5.35	4.56	4.68	4.16 d	...
GATT e						
Quota	0.88	0.88	0.97	0.97	0.97	0.97
Imports	0.18	0.40	0.51	0.42	0.62 d	...
non-GATT f						
Quota	0.37	0.37	0.30	0.30	0.38 g	0.35 h
Imports	0.05	0.06	0.12	0.30	0.37 j	...
Totals						
Quota	6.25	6.25	5.77	5.77	6.85	6.82 g
Imports	4.61	5.82	5.18	5.40	5.15 d	...

Note a: imports base on licences - hence data may differ from Comext trade statistics
b: plus 0.5 million tonnes over the years 1983 and 1984 and 0.45 million tonnes over the years 1985 and 1986
c: for the period 1.1.87 to 31.12.90 the quota is set at 21.0 million tonnes with a maximum of 5.5 million tonnes within any year
d: January to September
e: 85 percent of the quota is reserved for Indonesia
f: Peoples' Republic of China and Vietnam
g: of which China has a quota of 350,000 tonnes and Vietnam 30,000 tonnes
h: China only. A quota for Vietnam is to be set
j: January to September of which Vietnam 30,000 tonnes

Source: Commission, internal documents.

The agreement with Thailand did not stem the growth of imports of cassava and other cereal substitutes. The Community, threatening even more stringent measures, was able to enter into VER agreements with the other main suppliers of cassava, Indonesia, Brazil and China and, from 1987, Vietnam.

The Community also sought to limit imports of corn gluten feed and citrus pellets from the United States. In this the Community was unsuccessful. When a subcommittee of the House Agricultural Committee held a hearing on 4 October 1983, it was clear that the United States was willing to start a trade war to prevent these proposals taking effect. (Koester and Valdes, 1984).

The External Trade Regime for Cassava

A 6 percent duty is charged on imports of cassava if they fall within the quota limits. In principle a variable levy, set at the rate for barley, is payable on imports in excess of the quota limits but surveillance is strict and the quotas are in practice respected. The tariff is VAT-bound and, being lower, takes precedence over the levy for amounts within the quotas.

However the tariff on tapioca flour or meal is not bound and stands at 28 percent, and does in effect exclude such imports. For the ACP states, in principle there is a preferential levy on cassava, but this is ineffective as the 6 percent bound tariff is lower and therefore operative.

Community Imports and Thailand

A major reason for the growth of exports from Thailand has been the involvement of German and Dutch firms in the pelletisation and shipping of cassava to the Community. In 1980 six foreign companies accounted for 85 percent of Thailand's cassava exports (Arnold, 1982).

Although there have been a number of dissenting views - Nelson argues that cassava cultivation is responsible for a loss in fertility, while Arnold argues that the decline in yields is rather the result of extending cultivation into less fertile regions - in general Thailand seems to have benefited significantly from the trade. The effect of the quota has been to raise the price on the Community market to close to the next cheapest source of starch. Arnold reports that by March 1983, the price of a soyameal/cassava mix had risen to 99.3 percent of the Community price of barley. Moreover the economic rent appears to have been appropriated by Thailand and largely reflected in the farm-gate prices of unprocessed cassava. The effect of the quota was to raise the farmgate price 65 percent between 1981 and March 1983, and at the latter price the return to labour became 6 dollars per day compared to the Bangkok minimum industrial wage of 3 dollars per day (Arnold, 1982). Thailand has also received funds from the Community to encourage diversification into other crops.

Nevertheless the arguments in favour of a liberalisation of the imports of cassava are potent. First of all there would still be a welfare gain to Thailand and the other exporting countries. The net gain is smaller

than it would be if these countries were not now receiving an economic rent but is significant nonetheless. Secondly there would be a welfare gain in the Community if compounders were permitted to use less costly ingredients in their animal feed, gains which would be passed onto the livestock farmers and ultimately to the consumer. Against this consumer surplus gain, there is clearly a producer surplus loss (which under neo-classical assumptions is smaller than the consumer gain) suffered principally by feed wheat and coarse grain farmers.

On a more general and dynamic level, however, there is the whole vast question of the allocation of agricultural resources among the industrial countries and the third world. This is a clear case where, at least at the moment and for some time to come, the developing countries have a clear comparative advantage in the production of an important constituent of animal feed. At a time when these countries are losing their advantage in a range of other markets (vegetable oils and oilmeals, sugar, rubber, fibres) or consumption in the major industrial markets is approaching saturation (tropical beverages) or declining (tobacco), it hardly makes sense for the industrial countries to restrict the third world in the production of this commodity. Obviously apparent budgetary imperatives frequently override economic rationality, so it is important to calculate the impact on the Community of the liberalisation of trade in cassava.

Gains from Liberalisation of the Cassava Regime

There are several ways in which the regime might be eased. The tariff on cassava could be reduced or set to zero. The VER quotas could be raised or abolished. We take a maximalist hypothesis and assume that both the tariff and the quotas are removed.

One difficulty in the simulation of such a policy change is that the world price after liberalisation may be very different to the existing world price, since trade in cassava is dominated by the Community and the actual price is therefore largely determined by the existence and size of the Community quotas. Thus liberalisation may imply large increases in trade flows and changes in the world price. The results will be more sensitive to the assumptions on the supply and demand elasticities than similar simulations for other commodities in this study.

The appropriate model is at once complicated and simplified by the fact that cassava is effectively a perfect substitute for the starch content of any cereal (or root or tuber). It is simplified because as long as cassava is cheaper than other forms of starch, it will be incorporated into feeds. The limiting factor is then the elasticity of export supply in the producing countries. The complications come in trying to estimate the effects on the markets in those commodities, feed wheat, coarse grains, citrus peel and so forth, which might suffer a reduction in demand.

Since a sufficiently detailed model, incorporating supply relationships for cereals and substitutes and demand functions, consistent with the sort of optimisation techniques used by the feed compounders, is not currently available (though it is understood that the OECD is working on just such a model), the simulations reported here only give broad

indications of the potential effects of cassava liberalisation on related markets.

The model assumes that the demand for cassava for any one feed compounder is perfectly elastic at a price marginally below the implicit price of the equivalent starch content of feed grain. However each compounder is faced with a somewhat different spectrum of prices, depending on transport costs to the mill, and, most importantly, the monetary compensation amounts in his country. Thus for the Community as a whole the import demand for cassava will be downward sloping. Historically, that is over the period 1976 to 1983, the price of the compound has been, with minor fluctuations, 27 percent greater than the price of maize. The differential narrowed in 1985 and 1986, reflecting a fall in the maize price in 1985 and rise in cassava price in 1986 owing to the entry of Spain and Portugal into the Community (FAO, 1987b). Nelson (1983) reports a regression showing that the price of cassava in the Community is almost perfectly correlated with the price of feedgrains.

Details of the calculations and elasticities used are given in the appendix to this chapter. One of the critical variables is the "world" price of cassava. Since the Community is the dominant importer, taking 75 percent of world imports in 1985 and nearly 80 percent in 1986 it is in the position of a quasi-monopsonist. Thus it cannot be argued that the price at which the balance of trade is effected is the price that would prevail, absent the Community quota arrangements. This problem is accentuated by the policy of rewarding traders who sell to non-Community markets by increasing their individual quotas on the Community market (Asian Wall Street Journal, March 9, 1988). This policy is designed to speed the development of new markets. Thus an exporter who sells, say, 100,000 tonnes to South Korea is entitled to sell an extra 130,000 tonnes to the Community (though the overall Thai quota of exports to the EC is not affected). The system has encouraged exporters to dump cassava on the non-European market with the expectation of recouping losses on additional sales to the Community.

In 1987 cassava prices were particularly depressed, but on average in our two reference years, 1985 and 1986, they were not much below the average levels for the 1981 to 1984 period (FAO, 1987b). Moreover there is little evidence of "dumping" on non- Community markets in those years. The Bangkok price of cassava on the "world" market was 40 percent below the Rotterdam cif price. Adjusting for shipping costs[11], a "world" fob price of 77.4 ecu/tonne was assumed. This is consistent with Arnold's estimate of the effect of the quota on farmgate prices quoted above. Alternative world prices of 10 percent above and below the central assumption were also used to explore the sensitivity of the results.

Taking 78.4 ecu/tonne as the central estimate of the world price, absent the European Community import quotas and tariff, suggests that the producing countries have been expropriating a rent of 334 million ecu in 1985/86 or 37 percent of export earnings. Thailand's cassava revenues on

---

[11] On the basis of a sample of freight charges between Bangkok and Europe over the two-year period $15 per tonne was used, (Shipping Statistics and Economics, 1985/86).

average in those years were 800 million ecu or 89 percent of the total, though Thailand with higher yields and presumable economies of scale in pelleting and transport is likely to have garnered a higher share of the rent. Indeed it is probable that for smaller producers such as Tanzania and the Philippines, there was little rent to be had.

Despite these very substantial rents, it is estimated that the producing countries would have received a net welfare gain of 25 million ecu from liberalisation. World prices would approximately double and they would have sold an additional 3.3 million tonnes and increased their export earnings by over one billion ecu.

Table 7.5

Results of complete liberalisation of Community imports of cassava, 1985/86 (ecu mill. unless otherwise specified)

Simulation	I	II	III
Initial world price (ecu/tonne)	70.6	78.4	86.3
Initial EC price	130.7	130.7	130.7
Final world price	113.5	116.7	119.7
Producer gain	393.0	334.9	278.9
Rent loss	363.5	309.5	255.4
Net welfare gains to exporting countries:			
ecu mill.	29.5	25.4	23.5
percent initial exports	3.2	2.8	2.6
Community consumer gain	158.7	121.7	92.1
Tariff revenue loss	51.0	51.0	51.0
Net welfare gains to Community:			
ecu mill.	107.6	70.7	41.1
percent initial imports	11.9	7.8	4.6
Increase in EC imports			
tonnes mill.	4.1	3.3	2.6
percent of EC cereal prod.	3.0	2.4	1.9
Additional intervention costs:			
percent 1985/86 costs	47.1	38.0	30.0
ecu mill.	601.8	484.9	384.0

If the liberalisation had been begun and completed in the years 1985 and 1986, the cost to the Common Agricultural Policy budget, assuming unchanged intervention prices for cereals, would have been some 484 million ecu or 38 percent of total expenditure on cereal intervention. Clearly this is a sizeable sum of money at a time of austerity in the CAP. However liberalisation need not mean that cereal intervention payments actually were increased in absolute terms. Since the policy is to reduce cereal output in the Community by a combination of freezing or limiting price in- creases (or even reducing prices as has happened with

durum wheat this year) and co-responsibility levies. Along with the implementation of this policy, if cassava imports were gradually liberalised, the rate of reduction in intervention outlays need only be marginally slowed. The central world price assumption has the percent reduction in cereal demand at only 2.4 percent for full liberalisation of cassava imports.

However, whatever the impact on the CAP budget, the Community as an entity is a significant net gainer from the liberalisation. Regardless of the extent to which the Agriculture Ministers' Council in Brussels decides to reallocate income from taxpayers to cereal farmers, the Community as a net consumer of cassava is better off to the tune of some 90 million ecu, after subtracting the loss in tariff revenue. These gains come from the reduction in the price of animal feed. Whether the gain is allowed to be absorbed in higher livestock farmer margins or is passed on in the form of lower meat prices depends on the pricing policy for the various sorts of meat within the CAP.

Proposals for incorporation premium

Concern about the declining use of cereals in animal feed in the Community has recently led the Commission, supported in the main by France and Germany, to put forward a proposal to subsidise the use of cereals in feed manufacture. The basis of the proposal is that animal feed compounders receive a subsidy for incorporating more cereals, where the subsidy would be based on the number of additional tonnes of cereals used compared with the average usage over a base period. The subsidy per tonne would be equal to the difference between the grain price and the price of cereal substitutes, such as corn gluten feed (Agra Europe, May 13, 1988). According to the proposal, the subsidy would be financed from the proceeds of the co-responsibility levy on cereal producers. In practice, since the levy is already in place, the subsidy would be a further burden on the CAP budget.

While the subsidy would be related to the price of corn gluten feed, which, being protein-rich is a complement to cassava (and its main alternative, rice bran), clearly reductions in the use of corn gluten feed would lead to similar proportionate reductions in the "filler ingredients". However, as we have seen, there is still a considerable profit margin in exports of cassava to the Community. The impact of the subsidy would be to force down the price of cassava more than proportionately so as to keep the price of the cassava-soybean meal or cassava-gluten mix competitive with the subsidised price of cereals. This would clearly be extremely serious for cassava producers and for Thailand in particular.

The proposal has spread alarm among the United States corn gluten feed industry, which will likely press the United States government to block the proposal if possible, and if not to retaliate. The proposal is also being resisted by a number of Community member states, including the United Kingdom.

As the proposal stands it seems unlikely that it will be adopted. From the Community viewpoint it has a number of drawbacks. For example, as an advisory committee to the Commission has pointed out, the first substitutes to be eliminated from feed would be Community-produced peas

and field beans. At a higher level of premium Community rapeseed meal would be eliminated (Working Party of the Advisory Committee on Animal Feeding, 1988). However, like the infamous oils and fats tax, first proposed over a decade ago, it is improbable that this proposal will die an early death.

CHAPTER 8

VEGETABLE OILS

This chapter deals with the possible liberalisation of the Community market to imports of vegetable oils. We are immediately confronted with the problem that oils are a processed commodity and part of a complex processing chain. At the primary level, seeds (or oleaginous fruits which is how the customs schedules describe palmnuts and kernels and coconut kernels, i.e. copra) are crushed to produce both oils and high-protein meals, used in conjunction with cereals or high-starch substitutes such as cassava to produce animal feeds. The production of oils in the Community and elsewhere will then depend not only on their own price and the prices of alternative crops, but also on the prices of oilmeals which themselves depend on the meat and poultry markets. At the next level oils are the basic input into fatty acid chemicals, including stearic and oleic acids, acid oils, fatty alcohols and glycerol, as well as being used in the processed food industry, the cosmetics industry, for producing candles, soap and of course domestic cooking oils, and for certain industrial processes including tin-plating.

In some cases unprocessed oilseeds are imported and processing takes place within the Community. This is largely the case with soybeans. In other cases, palmnuts and palm kernels and copra, processing industries are well established in the producing countries and the oil tends to be imported rather than the raw commodity. One reason for the difference is that soybeans are a major source of meal, and their protein content was the initial stimulus for their importation. There is little saving in transport costs in importing meal rather than the soybeans them- selves. On the other hand palmnuts and copra are rich in oils but relatively deficient in protein content. With them considerable savings in transport costs were available through importing the oil rather than the nuts or kernels. The efforts by the producing countries to build up their processing industries also increased the cost advantage of importing the oil.[12] Table 8.1 shows that the fastest growing of the principal oilseeds in terms of world production has been rapeseed, with sunflowerseed coming second. The principal reason for the fast increase in production of these seeds has been the support, in particular the crushing premiums, given under the Common Agricultural Policy. However the output of rapeseed has also be growing rapidly in Canada, China (PRC) and Poland.

Yet all of the explanation does not lie in subsidies. In the 1970s the fastest growing sector was meals, associated with rapidly rising herds. Thus oilseeds with high protein content were favoured, especially soybeans. Recently demand for meals has stagnated while demand for oils has been strong, particularly from the developing countries. Oilseeds also are attractive rotation crops from a technical farming viewpoint.

---

[12] Outside the producing countries only the U.K. still extracts oils from palmnuts or kernels, but the scale of that activity is rapidly diminishing.

Table 8.1

World production and exports of vegetable oils, 1981/82 to 1986/87 and average annual growth rates (a) (mill. tonnes and percent)

Production	1980	1982	1984	1985	1986	growth rate(b)
Soybeans	12.8	13.6	13.3	13.6	14.7	0.5
Sunflowerseed	4.7	5.6	6.2	6.6	6.5	4.7
Rapeseed	4.0	5.0	5.6	6.2	6.7	10.5
Palm oil	5.2	5.9	6.9	8.1	8.0	9.1
other (c)	11.4	12.0	13.7	13.3	12.3	1.4
Total	38.1	42.1	45.7	47.8	48.2	4.1
Exports						
Soybeans	3.4	3.7	3.7	3.2	3.8	-1.9
Sunflowerseed	1.2	1.6	1.9	2.2	1.8	12.2
Rapeseed	0.8	0.8	1.3	1.3	1.6	13.7
Palm oil	3.4	4.0	4.4	5.4	5.2	6.5
Palm kernel oil	0.4	0.5	0.5	0.6	n.a	n.a
Coconut oil	1.2	1.3	1.0	1.2	n.a	n.a
other	0.9	0.7	1.0	1.0	3.0(d)	5.8(d)

Notes a: crop year runs from October 1 of year cited to September 30 of following year
b: annual average growth rate, 1979/80 - 1985/86
c: cottonseed, palm nut, coconut, groundnut, linseed, safflower and minor oilseeds
d: including palm kernel and coconut oil

Source: USITC, 1987; UNCTAD, 1988.

Table 8.2 shows the amounts and sources of the principal tropical oils. In each case the countries of South East Asia are the predominant exporters. Two African ACP countries, Zaire and the Cote d'Ivoire, are minor exporters to the Community, as are Papua New Guinea and Fiji, also ACP. Oilseed production on a global basis has been growing rapidly. Other than in Europe, expansion has been particularly fast in the Far East though Latin America has also contributed.

The Community in World Trade in Oilseeds and Vegetable Oils

Table 8.3 shows how the production of oilseeds has grown in the Community over the last decade and a half. Production of rapeseed and sunflower seed have expanded at average annual growth rates of 10 and 17 percent respectively while soybean production has gone from zero to over 900 thousand tonnes. It also illustrates the imbalance in the production-consumption ratios for oil and for meal. Rapeseed oil and soybean oil are exported in significant quantities while rapeseed meal and soybean meal are imported in even more substantial amounts. Eleven million tonnes of soybean meal was imported in 1986/87, about the same

Table 8.2

Exports of palm oil, palm kernel oil and coconut oil, total and by major country, selected years, 1980 to 1985, (000 tonnes)

	1980	1982	1984	1985
Palm oil				
World exports	3615.8	3772.9	4307.4	5220.3
of which				
Malaysia	2136.2	2700.0	2959.4	3214.9
Singapore	656.0	483.7	739.6	929.4
Indonesia	510.5	302.2	246.9	651.9
Cote d'Ivoire	96.4	61.2	52.6	55.7
Zaire	10.0	4.2	6.4	15.0
Honduras	0.	0.2	15.1	20.0
Palm kernel oil				
World exports	387.8	455.0	540.5	631.6
of which				
Malaysia	218.9	334.2	390.0	429.9
Singapore	13.5	8.7	12.1	13.6
Indonesia	4.9	2.6	14.7	98.0
Cote d'Ivoire	14.0	10.2	9.8	11.9
Zaire	18.7	13.4	13.2	19.0
Brazil	2.6	0.1	12.8	5.7
Coconut oil				
World exports	1216.0	1270.3	991.4	1231.2
of which				
Philippines	918.5	921.2	587.6	650.6
Indonesia	40.6	n.a.	35.3	192.1
Sri Lanka	3.0	33.6	11.9	67.4
Singapore	35.0	50.0	72.1	63.2
Malaysia	62.5	59.0	67.7	60.1
Cote d'Ivoire	11.5	18.7	28.0	31.2
Papua New Guinea	34.1	37.6	40.9	38.8
Fiji	12.7	14.9	15.5	10.7

Source: UNCTAD, 1988.

as was produced in the Community. The reason why the consumption of sunflower oil is close to production is that, being free of erucic acid, it is better suited to the production of margarine than is rapeseed. Nevertheless as a result of the expansion of production of oilseeds in the Community over the last 15 years, the Community has grown in

Table 8.3

Community production of oilseeds, vegetable oils and oilseed meal and cake and self-sufficiency ratios (a), 1973/74, 1985/861986/87, and annual average growth rates (000 tonnes and percent)

	1973/74	1985/86	1986/87	growth rate 1973/74-1986/87
Rapeseed and colza (b)				
Seed: production	1058	3737	3688	10.1
self-suff'y	75.7	90.3	91.0	-
Oil: production	573	1613	1581	8.1
self-suff'y	125.1	129.6	140.0	-
Meal: production	748	2316	2270	8.9
self-suff'y	91.2	83.6	75.6	-
Sunflowerseed				
Seed: production	406	2700	3150	17.1
self-suff'y	130.1	88.4	93.1	-
Oil: production	120	1282	1421	20.9
self-suff'y	32.1	94.4	100.1	-
Meal: production	134	1191	1319	19.2
self-suff'y	91.2	83.6	75.6	-
Soybean				
Seed: production	0.	348	918	n.a.
self-suff'y	n.a.	2.6	6.9	-
Oil: production	0.	2288	2318	n.a.
self-suff'y	n.a.	147.4	152.2	-
Meal: production	0.	10733	10597	n.a.
self-suff'y	n.a.	52.6	52.3	-

Note a: self-sufficiency is here measured as the ratio of production to absorption (production + imports - exports), expressed as a percentage
b: the terms rapeseed and colza are sometimes used interchangeably, or though colza is sometimes used to distinguish rape from turnip rape.

Source: Commission, 1988a.

importance as an exporter of vegetable oils, while remaining a major importer of seeds, particularly soybeans, and meals.

The Community continues to import substantial quantities of soybeans from the United States. It has taken over 55 percent of total U.S>

exports on average over the last 10 years, but the share is now falling in response to the Community's own production. The next largest importer of US soybeans has been Japan which has taken an average of just under 20 percent. Taking soybeans and soybean products together the Community has taken 65 percent over the decade and Japan some 20 percent.

The Community output of soybeans has risen particularly rapidly, mainly because of the high proportion of meal relative to oil. The market for high-protein meals has benefited from their price advantage relative to cereals. Soybean meal is also in some cases preferred to other oilmeals, e.g. as a poultryfeed.

In sunflower too, plantings and harvests have exploded after a steady growth over the last two decades. The sunflower seed harvest amounted to 112 thousand tonnes in 1973, 1785 thousand in 1985 and probably some 3.5 million in 1987.

While the acreage devoted to all varieties of oilseeds, especially rapeseed, in the Community has been encouraged by supports to crushers, the northern producers, and Sweden outside the Community, have succeeded in producing rapeseed varieties with low or zero amounts of toxic erucic acids and glucosinates. In the Community there is a special crushing premium attached to en- courage production of these varieties since they can be more widely used in the food and feed industries and compete directly with imports of U.S. soybeans and soybean meals.

The Outlook for Oilseed Prices

World prices have recently been depressed by subsidies in the United States as well as in the Community. The subsidy regime in the United States has for many years consisted of withdrawing the commodity from the market if target prices could not be reached. A loan is made to the farmer of the value at support prices of the quantity he places in government-controlled storage. If market prices rise above the support price (making appropriate adjustments for interest on the loan etc.), the farmer may withdraw his crop from storage and sell it on the market. If not, he surrenders his title to the crop in return for the loan plus interest.

In the short run, this system of subsidisation tends to support world prices because large quantities are withdrawn from the world market unless the world price reaches a certain level.

In the long run, the impact on the world price is not clear. It depends on whether the subsidy program encourages more of the commodity to be grown and on how the accumulated stocks are finally disposed of. As long as the U.S. government absorbed soybean supplies when the world price was below the guaranteed price to U.S. farmers, the world price benefited. This to a large extent is what happened before 1980, when world prices were pushed up by the embargo on U.S. sales to the Soviet Union.

Under Public Law 480, concessional sales and grants are made for humanitarian purposes or development assistance. This has particularly helped U.S. exports of soybean oil in the 1980s, but these sales and

grants must have had some negative impact on the world price. In 1985 nearly one third of soybean oil exports received P.L. 180 assistance. Another program to help exports has been the direct loans to foreign governments and guarantees of loans made by commercial banks to finance foreign imports of U.S. agriculture exports through the Commodity Credit Corporation. Expenditures incurred for individual crops are not separately reported. (USITC 1987). Recently soybean exports have been increasingly subsidised through the Export Enhancement Programme (EEP).

Over the last two years in particular, there has been increased recourse to the EEP to sell vegetable oils to the developing countries, particularly India, Turkey, Morocco and Algeria. There is now pressure for this programme to be used to subsidise sales to the Soviet Union. Under the EEP, the U.S. government supplements exports nominally sold at world prices with a given "free" proportion drawn from stocks accumulated under past market support programmes. This of course tends to reduce world prices, while protecting U.S. mills. Besides the United States, Brazil and Argentina have also been aggressively subsidising exports of soybeans. The United States resents what it sees as the loss of export markets for soybeans and cereals owing to "unfair" competition from the Community.

The DME group will turn into a net exporter of oils on present trends, and, assuming some slow but continued run-down in herds, will become self-sufficient in meal and cake. Within the DMEs the ratio of exports to imports of vegetable seeds and oils has risen from 0.71 in 1970 to 0.83 in 1985. Excluding the United States the ratio has risen from 0.23 to 0.44, and for the European Community alone it has risen from 0.23 to 0.48 (UNCTAD, 1988). The Commission states that, without the recent tougher price adjustments to excess output, "overall production of oilseeds by 1994 may be put at about 17 million tonnes, i.e. about 5 million more than the 1987 record harvest" (Commission, 1988a).

The FAO points to danger that oilseed production in the developed countries may rise in response to pressures to limit cereals production (FAO, 1987a). There is some suggestion that this is happening in the Community at the moment owing to more stringent penalties for over-production in the cereals sector under the new stabilisation agreement. However this may merely represent the "shake down" problems of the adjustments to the price and intervention mechanisms, though, as we shall see, the penalties for exceeding the maximum guaranteed quantities remain fairly light.

Community Market Organisation

The principles for the common market organisation in oilseeds, oils and fats were laid down in 1966 in Regulation No. 136/66/EEC. Since the Community was far from self-sufficient when the common organisation of this market was established, and since import duties on oilseeds are "bound" under GATT rules at zero, the organisation differs from the archetypal variable levy and intervention buying model of the cereals, meat and dairy sectors.

A target price is set for rape and sunflower seeds, and slightly below this an intervention price is established. Guarantee thresholds for

rapeseed have been set since 1982/83. A guarantee threshold was first established for sunflowerseed in 1984/85. If buying-in exceeds the threshold, a reduction is made to the intervention price in the subsequent year. This has happened for the first time with the 1987/88 crop. However the penalties for exceeding quota are relatively mild, with a maximum of a 10 percent reduction in guaranteed prices from the beginning of the current marketing year. Furthermore the proposed "maximum guaranteed quantities" for the 1988/89 have been raised considerably on their 1987/88 levels, 4500 thousand tonnes rather than 3500 for rape, 2000 rather than 1700 for sunflower and 1300 rather than 1100 for soybeans. Furthermore, as Friedeberg points out, unlike the milk quota system, under the threshold system there is no direct link between the decisions of the individual farmer and what he will receive (1987).

A crushing aid matching the difference between the target prices and the world market prices is fixed weekly and paid to the industry on seed for which it has paid the intervention price.

The costs of the oilseed regime have been increasing rapidly. These have mainly taken the form of price subsidy payments to crushers. For rape and sunflower seed, total EAGGF expenditure amounted to 925 million ecu in 1983 and 1666 million ecu in 1987. For soya beans and flax seed, expenditure has risen from 21 million ecu in 1983 to 225 million in 1987.

Total export refunds in the sector in 1987 only came to 4 million ecu of the 1891 million total budgetary cost, but the cost of ex- port refunds is likely to leap this year as plantings have risen substantially (though in the UK plantings appear to be down by 6 or 7 percent). For the less important seeds (castor and cotton) and for the increasingly important soya beans, the same organisation prevails except the terminology is different. In the case of flax seed, only a guide price is set while processing aid is available to the flax scutcher in the case of fibre flax and to grower in case of seed flax.

In the case of rapeseed a premium is applied to the target and intervention prices for the double-zero varieties. The commission has proposed restricting aid to only these varieties by 1991/92, but the proposal has been frozen while the impact on wild-life is studied.

The Proposed Oils and Fats Tax

The increasing cost of subsidies in the oilseeds sector led to the Commission renewing their proposals for a consumption tax on oils and fats, though it has been renamed a "stabilisation mechanism". The aim would be to raise revenue to finance the growing costs of the oilseeds regime. It has also been suggested that such a tax would limit the growing costs of intervention in the olive oil and dairy sectors, by shifting demand away from other vegetable oils to olive oil and butter.

The tax would amount to the difference between the current year's price and a reference price (the average EC refined soybean oil price between 1981 and 1985). Each year in which the reference price exceeded the previous year's average price, a flat rate tax equal to that difference

would be levied on all oils and fats, including fish oils, at the refinery or, in the case of imports, at the border. It would also be levied on the oil content of imported foods. The tax rate would have amounted to about 330 ecu per tonne in 1987.

The tax has been strongly opposed by the exporting countries, in particular Malaysia and the Philippines, and by the United States. In the Community it was been resisted the most affected producer interests and, to some extent, by consumer groups. After withdrawing the proposal in June 1987, the Commission, strongly supported by France, presented it again at the European Council meeting in Copenhagen later in the year. The proposal was again successfully resisted in 1987, mainly by the U.K. and German governments. It cannot be excluded that it will be represented at some future date, essentially as part of a package to persuade the United States government to adopt restraints on soybean exports to the Community. At the latest FAO Intergovernmental Group on Oils and Fats meeting, the Commission representative refused to declare that the proposal was dead.

The Community's External Trade Regime in Tropical Oils

Oilseeds enter the Community tariff-free, while the low or zero tariffs on oilseed products are GATT-bound. The relatively liberal trade regime, which is so out of character with the typical protectionism of the CAP, was intended to compensate for the effects of creating the Community on the actual and prospective vegetable oil exports of the developing countries. Since then the commercial interests of a number of countries have changed. In particular the United States has become a major exporter of soybeans. Moreover the rising costs of farm support in the oilseed sector is yet another source of strain on the Common Agricultural Policy budget. It is not surprising that the oil- seeds sector is now rivalling the dairy sector as the major source of agricultural disharmony between the United States and the Community. Details of the MFN and GSP tariffs are given in Appendix 2.

Modelling the Community Market in Vegetable Oils

In order to determine the best structure for a limited size model of the Community vegetable oil market, it is necessary to consider the degree of substitutability as opposed to specificity in the uses of different vegetable oils, and in particular, for our purposes, the role of palm, palm kernel and coconut oils.

Palmoil exports to the developed countries have to compete in price with "liquid" oils produced from rapeseed, sunflower, soya and other temperately-produced oilseeds. These are all alternatives in the production of margarine though palmoil (together with coconut oil) has the cost advantage of not requiring hydrogenation.[13] Developments in refining and fractionation have led to readier substitution of one oil

---

[13] On the other hand palmoil has been subjected to a campaign by the soybean growers in the United States. It is certainly the case that the relative demand for polyunsaturated fats is increasing and rapeseed and sunflowerseed growers, even more than soybean growers, will benefit at the expense of palm and, especially, coconut oil producers.

by another, but it is still largely true that each vegetable oil, with its unique fatty acid chain, has retained its particular uses in the food industry, which no other oil can serve as well.[14] For example palmoil is generally preferred in chocolate manufacture and used to the extent that it is permitted, which in the United Kingdom is 5 percent of the oil content but in most European countries is zero. If the "completion" of the internal Community market in 1992 leads to a relaxation of the rules governing the use of non-cocoa vegetable oils in chocolate production, palmoil producers are likely to be the principle gainers. Aligning the Community norm to the current United Kingdom 5 percent rule would mean an increase in demand for palmoil in the Community of about 30 thousand tonnes, a not negligible amount equivalent to between 1/2 and 1 percent of world trade in palmoil.

Palm oil also has characteristics making it particularly suitable for certain types of cooking (including fish and chips),[15] as well as its traditional industrial uses in soap, candle and tin-plate production. The chemical properties of palm kernel oil are very different from those of palm oil. The value of palm kernel oil imports into the Community is relatively small (305 million ecu in 1985) and, for the purposes of the calculations, this oil was aggregated with the other main lauric oil, coconut oil, with which it is a close substitute.

The predominant oilseeds in Community are rape, sunflower, soya, palm, coconut and palm kernel. These are the oils specifically treated in the

---

[14] New treatments of palmoil, in particular, refining and interesterification, render it chemically suitable for a range of end-uses previously met only by the liquid oils. It can now satisfy the behavioural requirements of margarine manufacturers at acceptable degrees of unsaturation, but in the processing palmoil loses some of its competitive edge. It would now be technically possible to replace all the cocoa oil in chocolate by a mixture of palmoil fractions through the interesterification process (Macrae, 1985). However it may not be economically advantageous,and, in any event, it is currently and likely to remain illegal to label the end-product "chocolate", at least in the Community.

Palm kernel oil and coconut oil both contain lauric acid, which has a number of industrial uses, as well as being widely used in the food industry. For every ton of palmoil produced in the Far East, 1/5 to 1/4 tons of palm kernel oil are produced. This is about 90 percent saturated acids, of which almost 1/2 is lauric acid. There has been some suggestion that environmental concerns might restore the role of lauric acid in detergent production. On the other hand intensive research is currently being undertaken into ways of producing synthetic lauric acid, particularly because of the unreliability of the supply and price of coconut oil. The lauric oils (which also include babassu nut oil, which is little used these days) are used in confectionery manufacture, because of their resistance to rancidity, and for the extraction of lauric acid.

[15] This is because it continues to retain its frying properties after being heated to high temperatures and allowed to cool time and time again.

calculations. A number of other oils are produced in the Community or imported, of which the most important are cottonseed, safflower, groundnut, corn, mustard and linseed. Groundnut oil has been the most significant of these in the past. However the food processing companies have turned to sunflowerseed oil which shares many of its properties and is in much more dependable supply. To some extent fish oils and animal fats also compete in the same market.

In terms of acreage rape, sunflower and soya took 92.6 percent of the Community acreage given over to oilseeds in 1985. In terms of Community production of vegetable oils and fats, these three accounted for 71 percent on average over the years 1985 and 1986.

Butter and olive oil are not close substitutes for the vegetable oils under discussion and were omitted from the analysis.[16] Details of the model and the elasticities used are to be found in Appendix 2. The supply elasticities of soybean oil with respect to its own price and the price of substitute oils are somewhat lower than the equivalent elasticities for the other oils to reflect the fact that soybean oil is very largely a by-product of soymeal.

The Effects of Eliminating Tariffs on Tropical Oils

Here we only consider the tariff question in respect to crude oils. Imports of processed tropical oils are currently insignificant, though this is a potential area for development by the producing countries. (See Appendix 1 for a discussion of processing and tariff escalation.)

The Community imports little soybean oil or rapeseed oil. However there are not inconsiderable imports of sunflower oil from Argentina (which taxes seed exports to protect the local crushing industry). Thus it is not immaterial whether GSP imports of all vegetable oils, or only tropical vegetable oils, are exonerated from tariffs. In fact here we assume that only the tropical oils are included. This is probably politically less contentious.

---

[16] Butter does not have the chemical properties that are required by the food processing industry or for commercial cooking. Though clearly butter can replace margarine or vegetable oils at the domestic level, with rising incomes households are increasingly turning to particular oils and fats for specific purposes. Interestingly the concept of a unspecified frying medium called "vegetable oil" is almost unknown in the rest of the Community, except the Netherlands. Elsewhere households demand a single oil, though which still depends largely on local tradition. The same is largely true of olive oil. Though a limited substitutability seems to exist in the Mediterranean countries, it is only at the household level. Even then econometric estimates of cross price elasticities are small (Perone-Pacifico and Pieraccini, 1974, quoted by Caspari, MacLaren and Hobhouse, 1980).

Table 8.4

Sources of Community tropical oil imports, average 1985 and 1986, '000 tonnes and percent

	Palm oil		Lauric acid oils (Coconut and palm kernel)	
	tonnes	percent	tonnes	percent
Cote d'Ivoire	61.3	8.9	46.1	6.4
other ACP	51.7	7.5	37.3	5.2
total ACP	113.0	16.5	83.4	11.5
Malaysia	52.8	7.7	218.5	30.2
Indonesia	346.7	50.5	91.5	12.7
Philippines	2.9	0.4	273.3	37.8
other GSP	170.6	24.9	55.8	7.7
total GSP	573.1	83.5	639.2	88.5
DMEs	0.3	-	0.5	-
Total	686.3	100.0	722.5	100.0

Source: Eurostat Comext.

At present the average GSP tariffs on palm oil and lauric acid oils are 8 and 10 percent respectively, as against 12.5 percent for most oils supplied under MFN tariffs. The GSP rates differ depending on the size of the container (another form of tariff escalation which militates against the producing countries developing packaging industries), on whether they are intended for human consumption or industrial use and whether they are in liquid fraction or solid form.

It can be seen from Table 8.4 that the tropical oils are predominantly imported from GSP countries and, among these, particularly from South-East Asia. However there are significant exports from the ACP states, and this partly explains the continuance of relatively high tariffs on non-ACP imports.

Table 8.5 shows the results of the estimates of the effects of eliminating tariffs on imports of tropical oils. The numbers are small in absolute amounts, though the percentage changes in Community prices are substantial. The price of palmoil in the Community is estimated to fall over 6 percent and the price of lauric acid oils 8 percent. World prices of these commodities rise marginally. The ACP countries lose out in their exports of tropical oils to the Community and as a result incur welfare losses. The consumer surplus gains, net of producer surplus losses, (3rd column, lower panel) to the Community are a sizeable share of initial trade (7 percent in the case of palmoil and 8.6 percent in the case of the lauric acid oils), though these disappear after the loss of tariff revenue is taken into account.

The impact on the CAP budget would be minimal. The model calculations assume that the reduced demand for oilseeds in the Community is

Table 8.5

Effects of eliminating tariffs on GSP imports of crude tropical oils on the Community and on ACP and GSP exporters, (percent. of av. 1985-86 levels and mill. ecu)

Direct effects:

Oil (percent)	EC/ACP price	GSP/world price	ACP exports	GSP exports	EC cons.
soybean	-1.4	-1.4	0	-1.3	-1.3
rapeseed	-1.3	-1.3	0	-1.4	-1.4
sunflowerseed	-4.5	-4.5	1.1	1.1	1.1
palmoil	-6.3	1.2	-18.9	3.3	2.5
lauric acid oils	-8.0	1.2	-23.9	3.4	2.9

(mill. ecu)	ACP welfare	GSP welfare	EC welfare	EC tariff rev. loss	total
soybean	0	0	14.1	0	14.1
rapeseed	0	0	11.1	0	11.1
sunflowerseed	0	-3.4	40.1	0	36.8
palmoil	-9.3	4.3	23.5	-26.4	-7.9
lauric acid oils	-6.4	6.0	38.4	-35.6	2.5
totals	-15.7	7.0	127.3	62.0	56.5

Indirect effects (a,b):

redistribution within LDCs	29.6
redistrib. from non-EC developed c'tries to LDCs	42.1
of which to ACP states	0.1
total gains to LDCs	51.2
of which to ACP states	-15.6

Note a: indirect effects based on 1985 trade data (UNCTAD, 1988)
b: based on trade in palm, palm kernel and coconut oil.

reflected in lower production and the lower volume of output and lower prices mean a reduction in farm incomes. Even if it were decided to maintain intervention prices for oilseeds, the cost would be small since the price of soybean oil and rapeseed oil only fall by just over one percent, while the price of sunflowerseed oil actually rises. Moreover changes in oil prices would only be partially reflected in seed prices, given that the market for oilseed meals is not directly affected.

The gains to the developing countries are unequivocal when the benefits of the higher prices on non-Community trade are taken into account. The overall gains to the developing countries would be of the order of 1 1/4 percent of total trade.

Similar calculations have done to determine what would have been the effects of the proposed fats and oils tax if it had been levied at a

Table 8.6

Effects of a consumer tax of 330 ecu/tonne on vegetable oils on the Community and on ACP and GSP exporters, (percent. of av. 1985-86 levels and ecu mill.)

Oil (percent)	EC/ACP price	GSP/world price	ACP exports	GSP exports	EC cons.
soybean	45.7	-2.6	0	0	-2.5
rapeseed	46.1	-2.4	0	0	-2.8
sunflowerseed	38.9	-4.9	0	2.9	2.9
palmoil	56.3	-2.7	-12.7	-12.7	-12.7
lauric acid oils	45.8	-1.8	-9.0	-9.0	-9.0

(ecu mill.)	ACP welfare	GSP welfare	EC welfare	EC tax rev. gain	total
soybean	0	0	-501.1	494.8	-6.3
rapeseed	0	0	-451.5	445.0	-6.5
sunflowerseed	0	-3.4	-397.5	403.3	2.4
palmoil	-3.9	-9.5	-210.9	196.5	-27.9
lauric acid oils	-1.4	-8.4	-228.8	218.0	-20.5
totals	-5.3	-21.4	-1789.7	1757.5	-58.8

Indirect effects (a,b):

redistribution within LDCs	49.8
redistrib. from non-EC developed c'tries to LDCs	-62.7
of which to ACP states	-0.2
total gains to LDCs	-16.2
of which to ACP states	-5.5

Note a: indirect effects based on 1985 trade data (UNCTAD,1988)
b: based on trade in palm, palm kernel and coconut oils.
rate of 330 ecu/tonne in 1985/86, which seems to be the sort of level under consideration.

Despite the repeated avowals of the Commission, the proposed tax would be highly damaging to the developing countries. The falls in world prices are not as great as one might expect, primarily because the cross-price elasticities imply that the demand for oils taken as a whole is relatively price-inelastic. Although Community prices rise by up to 56 percent, the demand for vegetable oils as a group fall only by about 3 percent. Unfortunately for the countries exporting the tropical oils their percentage price increases from the proposed flat tax across all products would be higher than for domestically produced oils. That and the pattern of demand elasticities mean that the Community demand for palm and the lauric acid oils is estimated to fall 12.8 and 9.0 percent respectively.

The loss in welfare and foreign exchange earnings to the exporting countries, both ACP and GSP, would be quite severe. It clearly is ingenuous of the Commission to argue that the developing countries will not suffer. Moreover not only will the relatively well-off countries of South East Asia lose export markets, but so too will the much more vulnerable ACP countries of Africa, some of whom have recently gone into oil palm cultivation. The effect of the tax will be to more than wipe out the GSP and Lome tariff preferences.

However the really large cost is incurred by consumers in the Community. The 1790 million ecu in Table 8.6 includes both a consumer and a producer loss. However some 70 percent of the cost will fall on the consumers. If farmers are compensated for falling oil prices so that their real incomes are maintained, the taxpayers will bear the other 30 percent (about 540 million ecu) of the welfare burden of the tax. The revenue estimated at 1758 million ecu compares with EAGGF expenditures of 2028 and (an estimated) 1891 million ecu on the oilseed sector in 1985 and 1986. When this is blown up to cover oils excluded from our calculations, the revenue would have come to some 2.5 billion ecu, enough to have more than covered intervention and restitution costs on average in 1985 and 1986 (though, in terms of the crude self-financing rules-of-thumb beloved of the Council of Agricultural Ministers, this ignores the fact that half the value added from the oilseeds sector comes in oilmeals).

Reforming the Community oilseeds regime

The quantitative analysis in this chapter has been concerned with the question of whether some liberalisation of tariff barriers to GSP oil imports is feasible, in particular in terms of the loss of protection given to Community oil refiners and to ACP producers. Secondly we have sought to demonstrate the effects that the imposition of an oils and fats tax would have on the ex- porting countries and the Common Agricultural Policy budget.

The latest moves to "reform" the CAP oilseeds regime is a related but conceptually distinct set of policy adjustments involving guarantee thresholds and reduced intervention prices. Earlier in this chapter there was some discussion of the 1988 agreement on the details of these reforms. Clearly any quantitative exercise to determine their effects within the Community or on the rest of the world would require a detailed model of the whole oilseed complex.

In general, however, the developing countries as well as the consumers in the Community should welcome any moves to reduce the scale of protectionism in the oilseeds sector. At the same time it is clear that there are those within the Community farm lobbies, governments and in the Commission itself who see a solution to the growing cost of supporting this sector (now third in terms of EAGGF expenditure) in further protection, or as it is put "rebalancing" the Common Agricultural Policy. This would imply a trade-off, negotiated essentially with the United States, in which some reduction in the subsidisation of cereal and oilseed exports would be offered in return for the imposition of tariffs on oilseeds, now GATT-bound at zero. THe losers from such an arrangement would be the consumers in the Community, the developing countries and the GATT principle of steadily reducing barriers to international trade. A quantitative assessment of the

implications must await the modelling of the international trading system in agricultural goods, which needs to be both more comprehensive in its linkage of different sectors and more disaggregated than has been achieved up to now.

APPENDIX 1

TARIFF ESCALATION AND TROPICAL PRODUCTS

One route by which the developing countries might reduce their dependence on traditional primary goods exports is through increasing the processing of these goods now exported in crude form. It is often argued that the reason for the failure to substantially raise the ratio of processed to unprocessed commodities has been tariff escalation, that is the tendency for tariffs facing these countries to increase the higher the goods are in the processing chain. It is not the purpose of this appendix to undertake significant new analysis of the extent or effects of tariff escalation. This report is essentially concerned with opportunities for the liberalisation of tariffs and removal of NTBs on tropical goods in their primary form. This appendix merely sets out to review the seriousness of tariff escalation on the tropical goods under consideration, and some other significant exports of tropical countries.

First however consider the changes over the last two decades in the relative proportions of exports of certain key commodities in their processed and unprocessed forms as shown in Table A.1.1.

Perhaps the most striking message in these data is that, despite widespread impressions to the contrary, the developing countries have made substantial progress in increasing the extent to which their natural-resource-based products are processed prior to export. This is the case with most of the commodities detailed in the table, including cocoa, copra, cotton, rubber, tobacco and wood. The same generalisation also holds for fruit, meat, leather and jute (Cable, 1987, 175). Clearly further progress could be made in increasing the share of processed exports of these, and other, commodities. Also a country-by-country analysis would show that most processing of these commodities is undertaken in the relatively better-off economies of South East Asia, India and Latin America, rather than Africa and the poorer economies of South Asia (UNCTAD 1988, Table 1.25).

While tariff escalation clearly does make it more difficult for the exporting countries to raise the share of processed goods in their exports, it is by no means the only, or in all cases, the most important factor. After all to a large extent under various GSP arrangements the processed goods of developing countries are imported tariff-free by the developed countries. This is generally the case with articles made of wood, rubber and leather. Most GSPs are less generous with foodstuffs, and very often GSP tariff rates on processed foods remain extremely high (Davenport, 1986).

Furthermore it has been shown by Cable (1987) that the Tokyo Round MTNs actually resulted in raising tariff escalation in a fair number of the cases he examined. The developing countries sought to counter this by specifically requesting reductions in escalation and by trying to get the Swiss formula for tariff-cutting accepted. Under that system higher tariffs are cut proportionately more than lower tariffs. Cable's results are summarised in Table A.1.2.

Table A.1.1

Primary commodities imported by the DME countries in raw and processed forms from developing countries as a proportion of the total import values of the commodity group, 1965, 1975 and average 1981/1984, percent

	1965	1975	1981/1984
Cocoa			
beans, raw and roasted	90.5	79.9	71.8
powder	0.2	1.2	1.7
butter and paste	9.2	17.6	20.8
chocolate etc.	0.1	1.2	5.7
Coffee			
roasted or not, and coffee substitutes	99.8	97.2	95.9
extracts, essences and concentrates	0.2	2.8	4.1
Sugar			
raw, solid	45.7	62.0	39.1
refined	46.9	33.1	46.6
molasses	7.5	4.9	14.3
Copra			
copra	72.6	49.8	15.5
coconut oil	27.4	50.2	84.5
Cotton			
raw	80.9	60.7	42.2
yarn	1.9	10.3	24.4
fabrics, woven	17.2	29.0	33.4
Rubber			
natural and similar gums	99.4	93.0	77.7
materials e.g. sheets, tubes	0.3	0.6	0.9
tyres and rubber articles	0.3	6.4	21.3
Tobacco			
unmanufactured	97.2	95.6	86.0
manufactured	2.8	4.4	14.0
Wood			
in the rough or roughly squared	55.9	43.8	40.5
shaped or simply worked	26.3	24.7	23.7
pulp and waste paper	1.9	3.1	7.4
veneers, plywood etc.	13.5	20.6	18.0
wood manufactures	2.4	7.8	10.5

Source: Unctad, 1988.

Table A.1.2

Tariff escalation in selected tropical products on ten markets (a)

	Nominal tariff (b) before MTN	after MTN	Percent reduction	Change in escalation
Coffee	10.0	6.8	32.0	
Processed coffee	13.3	9.4	29.3	increased
Cocoa beans	4.2	2.6	38.1	
Processed cocoa	6.7	4.3	35.0	no change
Chocolate products	15.0	11.8	21.3	increased
Oilseeds	2.7	2.7	0.0	
Vegetable oils	8.5	8.1	4.7	reduced
Unmanufactured tobacco	56.1	55.8	0.5	
Manufactured tobacco	82.2	81.8	0.5	no change
Natural rubber	2.8	2.3	17.9	
Semi-Processed rubber	4.6	2.9	37.0	reduced
Rubber articles	7.9	6.7	15.2	increased
Textile yarns (exc. hemp)	4.0	2.9	37.0	
Twine, rope, etc.	5.6	4.7	16.1	increased
Jute fabrics	9.1	8.3	8.8	increased
Semi-Manufact'd wood	2.6	1.8	30.8	
Wood panels	10.8	9.2	14.8	increased
Wood articles	6.9	4.1	40.6	reduced
Furniture	8.1	6.6	18.5	increased

Notes a: EC, Japan, Australia, New Zealand, Canada, Switzerland, Finland, Norway and Sweden
b: unweighted average of product averages in each market including zero tariff lines.

Source: Cable 1987, 173.

protection at different stages in the processing chain. Apparently low tariff rates may conceal high rates of effective protection where tariff rates on inputs are even lower, or zero, and, particularly where processing involves major increases in value added. Thus in the developed countries rates of effective protection on vegetable oils rise to eight times the nominal rate of protection (Yeats, 1987, 119). In the Community the effective rate on vegetable oils is estimated at over 50 percent, though the average of nominal rates is of the order of 10 percent.

There are major problems in calculating effective tariff rates accurately, principally because the necessary data on value added in each stage of processing in the importing country are not readily

Table A.1.3

Approximations of the effective rates of protection for selected commodities, percent

	European Community	Japan	United States	All developed
Processed meat products	51.7	59.6	4.4	15.0
Preserved sea food	26.5	23.2	2.5	3.7
Preserved fruits	40.8	21.6	72.5	43.4
Processed vegetables	37.9	40.2	20.2	30.6
Coffee extracts	45.5	76.6	0.0	42.6
Chocolate	(a)	82.6	0.1	-3.3
Wood manufactures	9.2	1.3	10.3	7.4
Paper and paperboard	5.5	13.7	0.7	4.3
Articles of paper	12.6	0.7	8.7	7.6
Rubber manufactures	4.5	1.1	-0.4	5.0
Cotton yarn	7.6	13.7	18.3	9.0
Wool yarn	1.1	14.0	18.1	7.8
Jute yarn	7.2	19.8	4.7	8.7
Cotton fibres	11.8	10.0	13.5	11.0
Wool fabrics	5.1	25.3	85.8	34.0
Jute fabrics	10.0	5.3	(a)	0.3
Leather	6.0	21.2	8.1	7.0
Leather manufactures	9.9	18.6	17.5	13.7
Vegetable oils	50.6	49.6	-1.5	36.1
Tobacco manufactures	117.4	156.0	9.4	47.0

Note a: no effective tariff is given since the ratio of the input to final product tariff could not be computed

Source: Yeats, 1987, 119.

available. Secondly there is the perennial problem of tariff-averaging when estimates of effective protection for a group of products are sought. As a result there are wide differences in published estimates of effective protection (Yeats, 1984).

Beyond these problems there are conceptual difficulties. In particular tariff escalation need not mean a trade bias against processed goods, since the extent of bias induced by any tariff depends on the price elasticity of demand for the good in question (Yeats, 1984). With all these caveats, Table A.1.3 presents calculations of approximate effective rates of protection for a number of tropical goods.

The table shows that exceptionally high rates of effective protection in the European Community and Japan apply to processed foods in general and manufactured tobacco. In an earlier study Yeats calculated a European Community effective tariff rate on cocoa powder and butter of 76 percent, on roasted coffee 35.7 percent and on milled rice of 70.3 percent or 105.9 percent when levies are included (1981). These last figures are based on nominal rates at the end of the Kennedy Round of MTNs. In fact effective rates for these commodities are likely to be higher now, since the nominal rates on the processed products have

remained broadly unchanged while nominal rates on the raw material have been lowered.

Table A.1.4

Hypothetical effects of Uruguay Round multilateral trade negotiations on EC effective tariffs for certain products (a)

	Nominal tariff (b)		Effective tariff	
	before MTN	after MTN	before MTN	after MTN
Cocoa beans	3.0	0.0		
(i) Butter, paste	10.0	7.5	49.7	50.0
(ii) Butter, paste	10.0	5.0	49.7	33.3
(i) Powder	8.0	6.0	36.3	40.0
(ii) Powder	8.0	4.0	36.3	26.7
Coffee	4.5	0.0		
(i) Processed coffee	12.6	9.5	29.4	29.1
(ii) Processed coff.	12.6	6.3	29.4	19.4
Copra	0.0	0.0		
(i) Coconut oil	10.8	8.1	120.3	90.3
(ii) Coconut oil	10.8	5.4	120.3	60.2
Palm nuts	0.0	0.0		
(i) Palmoil	8.4	6.3	120.2	90.1
(ii) Palmoil	8.4	4.2	120.2	60.1
Palm kernels	0.0	0.0		
(i) Palm kernel oil	10.0	7.5	154.7	107.1
(ii) Palm kernel oil	10.8	5.4	154.7	77.4
Tobacco				
Unmanufactured	7.5 c	0.0		
(i) Manufactured	82.0 d	61.5	117.1	90.4
(ii) Manufactured	82.0 d	41.0	117.1	60.3

Notes a: see text for discussion of assumptions
b: where different rates are applicable an unweighted average of GSP tariff rates except where there is a tariff quota, when MFN rates is used. For example, in the case of vegetable oils, the average incorporates GSP rates for crude oils and other oils, in solid fraction and otherwise, in small capacity packings and other packings, both for human consumption and for other uses
c: MFN rates. GSP exports are subject to quota. Tobacco tariffs have specific maxima and minima. The rates used are based on unit values for each tariff line in 1985 and where necessary converted to *ad valorem* equivalents.
d: cigarettes

Source: see text. The proportion of value added in processing is based on Yeats (1984 and 1987).

Finally we have set out to look at the impact of a set of hypothetical but plausible tariff reductions in the Uruguay Round on effective protection for a number of tropical products. We have assumed, in some cases rather optimistically, that tariffs on a number of primary products are altogether eliminated, at least for GSP-eligible countries. For cocoa and coffee beans this seems a fairly likely outcome. In the cases of tobacco it is less likely, both because of the concern to protect Community producers, the budgetary implications of the loss of tariff revenue and, most importantly, health arguments (though protection is a second-best means of dealing with that). Tariffs on oilseeds and nuts are already zero and GATT-bound.

For the processed goods, two alternative assumptions are made: firstly, tariffs are assumed to be cut by 25 percent; secondly by 50 percent. The second assumption springs directly from the Community proposal on tropical products, in which a cut of up to 50 percent is suggested for finished industrial products, though for processed agricultural goods only "significant" reductions are mentioned.

The upshot of the exercise is that where current non-zero tariffs on the unprocessed commodity, cocoa beans, coffee and tobacco in our limited list, are set to zero, a 25 percent reduction in tariffs on the processed commodity is barely enough to bring about a reduction in effective protection. These results must only be seen as rough approximations to effective exchange rates. Nor do they take into account different price elasticities of demand for different stages in the processing chain. Nevertheless they do serve to illustrate the point that if tariff reductions are not to increase the bias against processed commodities, tariff cuts on processed goods may have to be a significant multiple of the cuts on the unprocessed goods. Otherwise there is a danger that the Uruguay Round will increase effective protection as it seems the Tokyo Round did in many cases.

APPENDIX 2

Table A.2.1

TARIFF RATES, ELASTICITY ASSUMPTIONS AND DATA SOURCES

Nominal MTN Tariff rates, GSP rates in parentheses, percent unless otherwise explicit.

(General note: These rates include MFN and GSP rate reductions following the 1982-84 consultations on tropical products to the extent that information has been made available to the GATT Secretariat. Actual rates are given where they are different from GATT-bound rates.)

Commodity and CN code	EC	United States	Japan	Canada
Cocoa				
beans, raw or roasted; 1801.00, also shells, husks etc 1802.00	3.0 (-)a	0.0	0.0	0.0
cocoa paste; not defatted 1803.10	15.0 (11.0)	0.0	10.0 (5.0)	0.0
defatted 1803.20	15.0 (11.0)	0.82 c/kg (0.0)	20.0 (10.0)	0.0
butter, fat or oil; 1804.00	12.0 (8.0b)	0.0	2.5 (0.0)	0.0
powder; 1805.00	16.0 (9.0)	0.82 c/kg (0.0)	21.5 (15.0)	10.0 (5.0)

Note a: (-) means no GSP treatment for dutiable items
b: EC quota limitation on GSP application was removed in 1987.

Commodity and CN code	EC	United States	Japan	Canada
Coffee				
not roasted; not decaffeinated				
0901.11	5.0 (4.5)	0.0	0.0	0.0
decaffeinated				
0901.12	13.0 (8.5)	0.0	0.0	0.0
roasted; not decaffeinated				
0901.21	15.0 (11.5)	0.0	20.0 (-)	4.41 c/kg 0.0
decaffeinated				
0901.22	18.0 (12.5)	0.0	20.0 (-)	4.41 c/kg 0.0
extracts etc.				
ex 2101.10	18.0 (9.0b)	0.0	14.0-35.0 0.0-35.0	15.43 c/kg 0.0

Note a: these rates include MFN and GSP rate reductions following the 1982-84 consultations on tropical products, to the extent that information has been made available to the GATT Secretariat. Actual rates are given where they are different from GATT-bound rates.

b: within a Community tariff quota of 19,2000 tonnes for soluble coffee in 1987 (see Official Journal L373, page 130 for details). Different rates apply to GSP imports into Portugal and Spain. There is no quota limitation for GSP imports of essences and concentrates of coffee.

-: no GSP treatment for dutiable item.

Commodity and CN code	EC	United States	Japan	Canada
Tobacco (excluding tobacco for use in cigars, and cigars)				
not stemmed/stripped;				
2401.10..				
10-49	23.0a	7.2-7.8b	0.0	27.56 c/kg
	(6.0c)	(0.0)		(8.36 c/kg)
other	14.0d	12.6b	0.0	27.56 c/kg
	(14.0e)	(0.0)		(8.36 c/kg)
stemmed/stripped;				
2401.20..				
10-49	23.0a	$1.37/kg f	0.0	44.0 c/kg
	(6.0c)	(0.0)		(0.0)
other	14.0d	13.4	0.0	44.0 c.kg
	(6.0c)	(-)		(0.0)
cigarettes;				
2402.20	90.0	26.0b	0.0	20.0
	(82.0)	(-)		(-)

Note a: min 28 ecu, max 30 ecu/kg
b: average incidence for 1981-83
c: min 16 ecu, max 27 ecu/kg
d: min 28 ecu, max 70 ecu/kg
e: min 28 ecu, max 31 ecu/kg
f: plus $2.04/kg on filler tobacco content

N.B. Because the Harmonised Customs Nomenclature is only being phased in gradually, tariff rates on tobacco are difficult to compare. Hence cigar tobaccos are excluded from this table. Also the data in this table is by no means complete as regards the United States and Canada, but tries to give the typical rates on the most important varieties in each category.

Commodity and CN code	EC	United States	Japan	Canada
Rice				
in husk				
1006.10	VL	2.8c/kg	0.0a	0.0
	(-)	(-)		
husked (brown)				
1006.20	VL	3.3c/kg b	0.0a	0.0
	(-)	(-)		
milled				
1006.30	VL	2.2c/kg c	0.0a	$5.51/ton
	(-)	(-)		(0.0)
broken				
1006.40	VL	0.69c/kg	0.0a	$5.51/ton
	(-)	(-)		(0.0)
flour				
1102.30	VL	0.2c/kg	25.0a	1.65c/kg
	(-)	(0.0)	(-)	(0.0)
groats, meal etc.				
1103.14	VL	0.2c/kg	25.0a	0.0
	(-)	(0.0)	(-)	

Note VL: variable levy. Under a 1987 regulation, 10,000 tonnes of basmati rice are admitted at a reduced levy, i.e. 25 percent lower than levy on other long-grained rice
a: export and import under Government management
b: basmati 1.3c/kg
c: parboiled 17.5 percent.

Commodity and CN code	EC	United States	Japan	Canada
Cassava				
fresh or dried;				
0714.10	6.0TQ	25.0	0.0a	0.0
	(-)	(-)	(-)	
starch;				
1108.14	L	0.0	25.0b	1.65c/kg c
	(-)		(-)	(0.0)
tapioca;				
1903.00	10.0VC	0.0	16.0	0.0
	2.0VC	(-)	(-)	

Note TQ: tariff quotas for Thailand, other GATT members (of which 85 percent reserved for Indonesia) and non-GATT members (China and Vietnam). Imports above quota are subject to levies, but practically none have taken place
a: 15.0 percent for non-feedstuff purposes, 25.0 percent for pellets
L: import levy b: global quota
c: discretionary licensing applied
VC: plus a variable component.

Commodity and CN code	EC	United States	Japan	Canada
Palm oil				
crude;				
1511.10	6.0a	0.0	7.0	10.0
	(4.0b)		(0.0)	(0.0)
other;				
1511.90	8.0-20.0c	0.0	7.0d	17.5
	(12.0e)		(0.0)	(12.5)
Coconut oil				
crude;				
1513.11	10.0f	0.0	9.0g	10.0
	(7.0h)		(-)	(0.0)
other;				
1513.19	15.0j	0.0	9.0g	17.5
	(13.0k)		(-)	(0.0)
Palm kernel oil				
crude;				
1513.21	10.0f	0.0	8.0	10.0
	(7.0h)		(-)	(0.0)
other;				
1513.29	15.0j	0.0	8.0	17.5
	(13.0k)		(-)	(12.5)

Note a: not for human consumption 4.0 percent
b: not for human consumption 2.5 percent
c: solid fraction : immediate packings of 1 kg. or less 20%
: other 17%
other: not for human consumption 8%
: other 14%
d: palmstearin 4 percent
e: ex. other than solid fraction, not for human consumption
f: not for human consumption 5.0 percent
in immediate packings of 1 kg. or less 20 percent
g: min. Yen 10/kg
h: not for human consumption 2.5 percent
in immediate packings of 1 kg. or less 18 percent
j: not for human consumption 8.0 percent
in immediate packings of 1 kg. or less 20 percent
k: not for human consumption 6.5 percent
in immediate packings of 1 kg. or less 18 percent.

Elasticity assumptions and data sources

Trade data, including import and export prices, are from the Eurostat Comext data bank, 1985 and 1986. Production data were generally drawn from Commission (1987a, 1987b, 1988a, 1988b), occasionally supplemented by FAO (1987b).

In general elasticities were drawn from the following surveys; Askari and Cummings (1977), Caspari, MacLaren and Hobhouse (1980), Valdes and Zietz (1980) and Bond (1984). Where additional sources were used they are mentioned below.

Cocoa: The Community demand elasticity was set at -0.58, the export supply elasticity at 0.8 from all suppliers

Coffee: Adams and Behrman also proved a useful source. The Community demand elasticity was set at -0.32, the ACP export supply elasticity at 0.46 and the GSP export supply elasticity at 0.65.

Tobacco:
Community demand; higher quality tobacco -0.4
lower quality tobacco -0.4
cross price elasticities 0.1

Community supply;	Quality	higher	lower
	higher	0.7	-0.05
	lower	-0.3	0.7

Rest-of-world export supply;	Quality	higher	lower
	higher	0.4	-0.05
	lower	-0.15	0.4

Estimates of cross price elasticities of demand are not, as far as we can determine available. In the Community the lack of easy availability of cigarettes made of air-cured and sun-cured tobaccos in member states outside Italy and Greece suggest low values.

Nor are estimates of cross price elasticities of supply apparently available. The switch from air- or sun-cured varieties to flue- or fire-cured varieties usually requires major investments in curing facilities, barns, furnaces etc., as well as requiring a constant supply of fuel. These fixed and working capital requirements imply low cross price elasticities (see EIU, 1983). Another factor which may restrict substitutability is soil condition.

Intervention price data were taken from Commission (1988c).

Rice: The Community demand elasticity was taken as -0.5, the export supply elasticities for the ACP, GSP and MFN (i.e. U.S.) exporters at 4, 5 and infinity respectively. Variable levies were calculated from data in USDA (1987b).

Cassava: The elasticity of export supply in Thailand was taken as 1.09 on the basis of a study quoted by Askari and Cummings (1977). The export

supply elasticity for the other exporting countries was set at the same value. The Community import demand elasticity was set at -5 on the basis of the coarse cereal elasticities in Tyers (1984) and Bucknell et al. 1982)

Data on quotas were supplied by the Commission.

Vegetable oils: The following elasticity assumptions were adopted:

elasticity of Community demand with respect to the price of:

oils	soybean	rapeseed	sunflower	palm	lauric
soybean	-0.6	0.2	0.2	0.1	0.05
rapeseed	0.2	-0.6	0.2	0.1	0.05
sunflower	0.2	0.2	-0.6	0.1	0.05
palm	0.1	0.1	0.1	-0.5	0.05
lauric	0.05	0.05	0.05	0.05	-0.4

Community supply:

soybean	0.5	-0.2	-0.2	0	0
rapeseed	-0.3	1.0	-0.3	0	0
sunflower	-0.3	-0.3	1.0	0	0
palm	0	0	0	0	0
lauric	0	0	0	0	0

Rest of world export supply:

soybean	4	-1.5	-1.5	0	0
rapeseed	-1.5	4	-1.5	0	0
sunflower	-1.5	-1.5	4	0	0
palm	0	0	0	3	-0.25
lauric	0	0	0	-0.25	3

Unweighted averages of tariffs on crude oils, solid fraction, and liquid, in small capacity packings or not, and for human consumption or industrial use, were used. In the cases of soybean, rapeseed and sunflower seed oils, MFN tariff rates were used and, in the cases of palm and lauric acid oils, GSP rates were used.

BIBLIOGRAPHY

Adams, F. Gerard and Jere Behrman (1982), Commodity Exports and Economic Development, Lexington, Mass.

Agra Europe (1988), Brussels, May

Anderson, Kym, and Rodney Tyers (1984), European Community Grain and Meat Policies: Effects on International Prices, Trade and Welfare, European Review of Agricultural Economics, 11(4): 367- 394

Anderson, Kym and Rodney Tyers (1986), International Effects of Domestic Agricultural Policies, in Issues in World Trade Policy: GATT at the Crossroads, R.H. Snape (ed.), London: Macmillan, 1986.

Arnold Tom (1982), Manioc as an Animal Feed in the EEC: Factors in its Growth of Use and Likely Consequence of Supply Restraints, MBA Thesis for the Department of Applied Economics, Catholic University of Leuven

Asian Wall Street Journal (1988), March 9

Askari, H. and J.T. Cummings (1977), Estimating Agricultural Supply Response with the Nerlove Model, International Economic Review, 18:2, 257-92.

Balassa, Bela and Mordechai Kreinin (1967), Trade Liberalization under the Kennedy Round; the Static Effects, Review of Economics and Statistics, May, 129

Bond, Marian E. (1983), An Econometric Study of Primary Commodity Exports from the Developing Country Regions to the World, Staff Papers, International Monetary Fund, 191-227

Bucknell, Allan E., David R. Harvey, Kenneth J.Thomson and Kevin A. Parton (1982), The Costs of the Common Agricultural Policy, Croom Helm, London and Canberra

Cable, Vincent, Tropical Products, Ch. 22 in J. Michael Finger and Andrzej Olechowski (eds.), The Uruguay Round, a Handbook on the Multilateral Trade Negotiations, World Bank, Washington

Caspari, C., D. MacLaren and G. Hobhouse (1980), Supply and Demand Elasticities for Farm Products in the Member States of the European Community, USDA: International Economics Division; Econ., Stats. and Co-Operative Service, Washington

Cawley, Richard and Michael Davenport (1988), Partial Equilibrium Calculations of the Impact of Internal Market Barriers in the European Community, Commission of the European Communities, Studies on the Economics of Integration, Vol. 2, Brussels

Cline W., N. Kawanabe, T. Kronsjo and T. Williams (1978), Multilateral effects of tariff negotiations in the Tokyo Round, in W.G. Devald (ed.),

The Impact of International Trade and Investment on Employment, U.S. Department of Employment, Washington

Commission (of the European Communities) (1980), The Economics and Problems of Oriental Tobacco Production in the European Community, Information on Agriculture, No. 7

Commission (1984), The Agricultural Situation in the Community, 1983 Report, Brussels, Luxembourg

Commission (1985), Completing the Internal Market, White Paper from the Commission to the European Council, Brussels

Commission (1987a), The Situation on the Commodity Markets, Brussels

Commission (1987b), The Agricultural Situation in the Community, 1986 Report, Brussels, Luxembourg

Commission (1988a), The Agricultural Situation in the Community, 1987 Report, Brussels, Luxembourg

Commission (1988b), Commission Proposals on the Prices for Agricultural Products, 1988/89, Brussels, COM (88) 120 final - I

Commission (1988c), Agricultural Prices 1987/1988, Newsflash: Green Europe, 41

Davenport, Michael (1986), Trade Policy, Protectionism and the Third World, Croom Helm, Beckenham

Economist Intelligence Unit (1987), World Commodity Outlook, London

FAO (Food and Agricultural Organisation of the United Nations) (1987a), Agriculture: Towards 2000, Rome

FAO (1987b), Commodity Review and Outlook, 1986-87, Rome

FAO (1987c), Report, Committee on Commodity Problems, Intergovernmental Group on Rice, CCP:RI 87/11, April

Finger, J. Michael and Andrzej Olechowski (eds.) (1987), The Uruguay Round, a Handbook on the Multilateral Trade Negotiations, World Bank, Washington

Friedeberg, Alfred S. (1987), Robbing Peter to Pay Paul, The EC's oilseeds policy and the proposed "stabilisation mechanism" on oils and fats, contribution to the Conference on the Future of Oils and Fats in Europe, Brussels

Groupe MAC (1988), The Cost of Non-Europe in the Foodstuffs Industry, Commission of the European Communities, Studies on the Economics of Integration, Vol. 12, Brussels

House of Lords (1988), Select Committee on the European Community, Farm Price Review 1988-89, 13th Report, Session 1987/88, June

Hudec, Robert E. (1987), Developing Countries in the GATT Legal System, Thames Essays, Trade Policy Research Centre and Gower, London

IMF (International Monetary Fund) (1987a), World Economic Outlook, October

International Wheat Council (1987), Developments in the World Rice Market, London

Jeon B. N., and G.M. von Furstenberg (1986), Techniques for Measuring the Welfare Effects of Protection: Appraising the Choices, Journal of Policy Modelling, Summer, 273-303

Koester, Ulrich and Alberto Valdes (1984), Reform of the Common Agricultural Policy: Impact on the Third World, Food Policy, 9:2, 94-98

MacBean, Alasdair I, and D.T. Nguyen (1987), Commodity Policies: Problems and Prospects, Croom Helm, Beckenham

Macrae, A.R. (1985), Enzyme-catalysed Modification of Oils and Fats, Phil. Trans. Royal Society of London, B310, 227-233, 1985, 232

Matthews, A. (1985), The Common Agricultural Policy and the Less Developed Countries, Gill and Macmillan, Trocaire

Nelson, G. (1983), Time for Tapioca, 1970 to 1980; European Demand and World Supply of Dried Cassava, Food Research Institute Papers, 19: 25-49

OECD (Organisation for Economic Co-Operation and Development) (1987a), National Policies and Agricultural Trade, Paris

OECD (1987b), National Policies and Agricultural Trade, Study on the European Economic Community, Paris

OECD (1988), Economy-wide Effects of Agricultural Policies in OECD Countries, Technical Manual of the Walras Model, Paris

Parikh, K.S. (1987), Hunger amidst Abundance - Causes and Cures: the Food and Agricultural Program of IIASA, International Institute for Applied Systems Analysis, Laxenburg, Austria

Perone-Pacifico, C. and Pierccini, L. (1974), Un Modello di Funzionamento del Mercato degli Olii Vegetali, Rivista di Economia Agraria, 29,3

Sathirathai, Surakiart and Ammar Siamwalla (1987), GATT Law, Agricultural Trade, and Developing Countries, The World Bank Economic Review, 1:4, 595-618

Shipping Statistics and Economics, London, various months, 1985-86

Tarr, David G. (1987), Effects of Restraining Steel Exports from the Republic of Korea and Other Countries to the United States and the European Economic Community, The World Bank Economic Review, 1:3, 397-418

Tobacco Quarterly (1988), Commonwealth Secretariat, London, May

Tyers, Rodney (1985), International Impacts of Protection: Model Structure and Results for EC Agricultural Policy, Journal of Policy Modeling, 7(2): 219-251

Tyers, Rodney, and Kym Anderson (1986), Distortions in World Food Markets: a Quantitative Assessment, background paper prepared for the World Bank's World Development Report 1986, Washington

Tyers, Rodney and Kym Anderson (1987a), Global Interactions and Trade Liberalisation in Agriculture, revision of Tyers and Anderson (1986), to be published in Economic Policies and World Agriculture, A. Ray and D.G. Johnson (eds.)

Tyers, Rodney and Kym Anderson (1987b), Liberalising OECD Agricultural Policies in the Uruguay Round: Effects on Trade and Welfare, Working Papers in Trade and Development, No. 87/10, Australian National University

UNCTAD (United Nations Conference on Trade and Development) (1988), Commodity Yearbook, 1987, Geneva USDA (United States Department of Agriculture) (1987a), Government Intervention in Agriculture, Measurement, Evaluation and Implications for Trade, Economic Research Service, FAER-229, Washington

USDA (1987b), Rice, Situation and Outlook Report, Economic Research Service, RS-50, Washington

USDA (1988a), Estimates of Producer and Consumer Subsidy Equivalents, Government Intervention in Agriculture, 1982-86

USDA (1988b), Tobacco, Situation and Outlook Report, Economic Research Service, TS-202, Washington

USDA (1988c), Cocoa, Foreign Agriculture Circular, March

USITC (United States International Trade Commission) (1987), U.S. Global Competitiveness: Oilseeds and Oilseed Products, report to the Committee on Finance, U.S. Senate, Publication 2045, Washington

Valdes, Alberto and Joachim Zietz (1980), Agricultural Protection in OECD Countries: its Cost to Less-Developed Countries, International Food Policy Research Institute, Research report 21, Washington

Winters, L. Alan (1987), The Economic Consequences of Agricultural Support: a Survey, OECD Economics Studies, 7-54,

World Bank (1986), World Development Report, 1986, Washington

World Bank (1987), World Development Report, 1987, Washington

World Bank (1988), Half-Yearly Revision of Commodity Price Forecasts - December 1987, International Commodity Markets Division, Washington

Working Party of the Advisory Committee on Animal Feeding (1988), Additional Use of Cereals in Animal Feeding, report of meeting, Brussels, April 22

Yeats, Alexander (1981), Agricultural Protectionism: an Analysis of its International Economic Effects and Options for Institutional Reform, Trade and Development, 3, 1-29

Yeats, Alexander (1984), On the Analysis of Tariff Escalation: is there a Methodological Bias against the Interest of Developing Countries, Journal of Development Economics, 15, 77-88

Yeats, Alexander (1987), The Escalation of Trade Barriers, Ch. 15 in J. Michael Finger and Andrzej Olechowski (eds.), The Uruguay Round, a Handbook on the Multilateral Trade Negotiations, World Bank, Washington