EUROPEAN PARLIAMENT

Directorate-General for Research

WORKING PAPER

The WTO negotiations in the field of agriculture and food

Strategic positions of the US and China

Agriculture, Forestry and Rural Development Series

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GLOSSARY

AMS	:	Aggregate Measure of Support
AMTR	:	Agricultural Market Transition Program
ARP	:	Acreage Reserve Program
BHA	:	Blair House Agreement
COFCO	:	China cereals, Oils and Foodstuff Company
CRP	:	Conservation Reserve Program
DAA	:	Draft Agreement on Agriculture
DP	:	Deficiency Payments
FAIR Act	:	Federal Agricultural Improvement and Reform Act
FARRM	:	Farm and Ranch Risk Management
FFB	:	Freedom to Farm Bill
MALs	:	Marketing Assistance Loans
MFA	:	Multi Fiber Agreement
NISA	:	Net Income Stabilisation Account
NTBs	:	Non-Tariff Barriers
PFCs	:	Production Flexibility Contracts
PSE	:	Producer Support Estimate
SFTC	:	State Foreign Trade Corporation
SIS	:	Supplemental Income Support
SPS	:	Sanitary and Phytosanitary
STEs	:	State-Trading Enterprises
TRIPS	:	Trade-Related Intellectual Property rights
TRQs	:	Tariff Rate Quotas
URAA	:	Uruguay Round Agreement on Agriculture
USDA	:	United States Department of Agriculture
WTO	:	World Trade Organisation

FOREWORD

Following the failure of Seattle, the agriculture negotiations started in Geneva taking Article 20 of the Marrakech Agriculture Agreement as their legal basis. So far there have been seven special sessions of the WTO Committee on Agriculture prior to the stock-taking meeting held in March 2001. During this initial phase, 125 WTO Member countries submitted, individually or as groups, 45 negotiating proposals and three technical submissions. While awaiting the final outcome of the new Ministerial Conference to be held from 9 to 13 November 2001 in Doha (Qatar), the second phase has been launched, with a new negotiation agenda covering ten trade and non-trade issues. These will be discussed at six new special sessions to be held up to March 2002.

Against this background, the European Commission approved the EC comprehensive negotiating proposal for agriculture on 8 November 2000, which was adopted by the Council and presented to the WTO on 15 December 2000. The proposal demonstrates that the EU is prepared to continue the process of reforming the CAP in order to give substance to the European agricultural model of the future, the cornerstone of which is the concept of the multifunctional role of agriculture.

On this basis, following the opinion of the Committee on Agriculture and Rural Development of the European Parliament (Arlindo Cunha, PE 286.401), plenary noted (Schwaiger Report, A5-0076/2001 – PE 301.341, p. 45) that the following strategic guidelines should be adopted for the current multilateral negotiations:

1. *The need for a broad negotiating round with a view to safeguarding the European agricultural model. The problem is the fact that, in principle, it would appear to be difficult to preserve the European model within the strict constraints of the purely liberalising agenda of the Marrakech Agriculture Agreement, without dealing with other WTO agreements, in particular, the Agreement on the Application of Sanitary and Phytosanitary Measures – SPS (concerning public health protection), the Agreement on Technical Barriers to Trade – TBT (concerning production methods used) and the Agreement on Trade-Related Aspects of Intellectual Property Rights – TRIPS (concerning the protection of geographical indications and designations of origin).*

2. *The incorporation of the multifunctional role of agriculture in the Marrakech Agreement on Agriculture on the basis of Article 20 (non-trade concerns) with a view to emphasising the various non-productive roles of the agricultural sector, in particular:*

- *The varying importance of production factors (surface areas, water, labour) in the various kinds of agriculture in the enlarged EU and the rest of the world, which result in different forms of production and land use.*

- *The positive external factors linked to agricultural activities, which traditionally involve the supply of goods and more recently the provision of services in the public interest (helping to preserve the environment and biodiversity, contributing to land management, food safety, public health, the development of rural communities and safeguarding jobs in the countryside).*

- *The fact that these goods and services in the public interest, which are linked to agricultural activities and which society demands, can be safeguarded only by the presence of farmers in the countryside and the continuation of agriculture's productive function throughout the territory of the EU.*

3. *When seen against this background, safeguarding the multifunctional role of agriculture becomes an essential condition for the acceptance by European citizens of a further opening up of agricultural markets, since the European agricultural model is closely tied up with a European food model and, ultimately, with the European social model which underlies European integration. The benefits of this social model cannot be withheld from the countryside. The European social model also requires public authorities to be held to account in areas that are sensitive for citizens, such as food safety, the quality of products, environmental protection and animal welfare.*

4. *Furthermore, recognition of the multifunctional role of agriculture at a multilateral level and, ultimately, the means and instruments regarded as compatible for defending it, may be the quantum leap which leads to a new common agricultural and rural development policy that is more consistent with preservation of the European agricultural and food model and better suited to the needs of the applicant countries. It could be based on three pillars:*

a) regulating agricultural markets, which, although progressively more open, are still imbalanced, entirely in line with the principle of stability underpinning the process of European integration;
b) sustainable rural development, while supporting, through the public authorities, goods and services in the public interest that are linked to agriculture and that the market, so far, has not be able to support; and, lastly,
c) the guarantee of healthy and high-quality products for consumers.

The next package of CAP reforms, due by 2002, could be a major step in this direction and would facilitate the current agriculture negotiations.

5. *Lastly, the idea of the multifunctional role of agriculture is also of fundamental importance in justifying special and differential treatment for developing countries. Since it enables different issues to be highlighted depending on the priorities of each individual country, it may also help to bring other WTO Members round to the ideas being put forward by the Community.*

   In conclusion, the multifunctional role of agriculture is a high-priority issue for the EU in the Millennium round and can strengthen its overall negotiating position.

On the basis of this work, the Committee on Agriculture and Rural Development of the European Parliament is expecting in future to express its opinion on further progress in the multilateral agriculture negotiations and on a possible approach to a broad round after the Doha Ministerial Conference. It has for that reason commissioned two studies from DG IV to help it with its work:

- *an internal study of the main WTO Members' strategies in connection with the forthcoming agriculture negotiations, drafted by the Agriculture Division of the DG on Research;*

- *an external study of the specific positions of the USA and China (in its capacity as a new member of WTO) drafted by Trinity College, Dublin.*

Following the publication and public presentation of these two studies at the meeting of the Committee on Agriculture and Rural Development of 11 September 2001, I should like to take this opportunity to thank the authors for their endeavours and to congratulate them. Their admirably professional approach has satisfied all our expectations. Their work will undoubtedly be of great use to the European Parliament when a new WTO agreement on agriculture, that is more in keeping with our agricultural and social model, is being drafted.

Arlindo CUNHA

Standing Rapporteur (WTO) of the Committee on Agriculture and Rural Development of the European Parliament

Executive Summary

The multilateral process to deal with China's WTO membership application was relaunched in Geneva in June 2000 with the resumption of the work of the WTO Working Party on China's Accession. Since that date the Working Party has met seven times, most recently in January 2001, and important progress has been made towards finalising the multilateral commitments that China will accept in its Protocol of WTO accession and the annexed Working Party report. Issues where progress has been reported include judicial review, uniform administration and transparency, product specific safeguards, non-tariff measures and anti-dumping, tariff rate quota administration and a transitional review mechanism. Work continues on other subjects such as agriculture, industrial subsidies, technical barriers to trade, trading rights and trade in services. Although WTO Members were unable to agree on the accession terms by the end of 2000 as was originally hoped, it is now anticipated that Chinese membership will be agreed in the course of 2001.

Chinese accession to the WTO will give it the right to participate in the current agricultural negotiations. An obvious question is whether China's accession is likely to make agreement in the agricultural negotiations easier or more difficult. China's WTO membership will affect the alliances and coalitions that are formed between the principal participants. There is clearly a need to analyse the effects of Chinese WTO membership on the EU/US dialogue in particular. This report begins with an analysis of developments in US farm policy since the conclusion of the Uruguay Round Agreement on Agriculture in 1995. It examines recent agricultural policy changes in the US and the likely outcome for the next Farm Bill, preparations for which have already started in the US Congress (Chapter 1). China is not yet a participant in these negotiations, so the views attributed to it in the report are speculative but informed by an analysis of China's agricultural policy objectives and trade regime which is presented in Chapter 2. This chapter also describes what is known about the details of China's WTO accession offer on agriculture, and it evaluates the growing literature on what China's WTO membership might mean for China's agricultural trade. Finally, Chapter 3 examines the main issues at stake in the current round of agricultural trade negotiations. The principal objective of this chapter is to identify those areas where China's interests are likely to coincide with the EU's, and where those interests are likely to differ.

Farm policy developments in the US

The US embarked upon the Uruguay Round with very ambitious objectives for the worldwide liberalisation of agriculture – what became known as 'the zero option'. But, after seven years of negotiations, America decided to settle for much less than had originally been sought. Access to foreign markets for farm exports was certainly improved by the tariffication of nontariff barriers and by the commitment to reduce tariffs to lower levels. But substantial agricultural tariff barriers remained, even after the agreed cuts had been made. Similarly, the agreed cut in domestic support would, by helping to curtail surplus domestic production, also help to expand the demand for imports from exporters such as the US. But, at only 20 percent, the agreed cut remained quite small. Moreover, the cut required was not commodity specific, leaving scope for getting away with lower, or even zero, support reductions on selected commodities. As for subsidised agricultural exports, despite the agreement, these remained legal under WTO rules, unlike subsidies on non-agricultural exports.

Immediately following the conclusion of the Uruguay Round, the US embarked on a revision of its domestic farm policy. In substituting decoupled payments known as production flexibility contract (PFC) payments for farm price support (other than marketing loan assistance), the FAIR Act of 1996 was a radical departure from all previous US agricultural policy. In order to understand more recent US agricultural policy initiatives, the question of why such a revolutionary farm bill got through Congress at that particular time needs to be addressed. In effect, the Congress gambled upon farm prices remaining relatively high for the duration of the new legislation. If this gamble were successful, farmers would enjoy the dual benefits of receiving high prices plus the PFC payments. All other things being equal, this was clearly the superior option to one of remaining with the old deficiency payments regime, under which no deficiency payments would be made in years when market prices were high. But, what if the gamble were unsuccessful, i.e. market prices did not remain high? In that event, experience suggested that the federal government would probably yield to pressure for farmers to be granted emergency financial assistance.

As shown in the report, the high farm prices reached in 1996 were not repeated in the next few years. So, for example, the price of wheat fell from $4.30 per bushel in 1996 to only $2.65 by 1998, and even lower in 1999. Unsurprisingly, farm incomes followed the same trend, declining from a total of about $55 billion in 1996 to only about $45 billion in 1998. Considerable pressure was exerted on the federal government, by a well organised farm lobby, to act in response to these trends. These representations were eventually successful and resulted in two Emergency Appropriations Acts. The first of these, passed in 1998, was worth $6 billion to farmers and paid out during the 1999 fiscal year (October '98 – September '99). The second one, passed in 1999, was worth $9 billion and paid out during FY 2000. Then, in 2000, an Agricultural Risk Protection Act was passed, worth $5.5 billion in FY 2000, and $1.6 billion in FY 2001.

An important question of recent US emergency assistance payments to agriculture is the domestic support payment category in which they should be placed for the purpose of notification to the WTO. Are they amber, blue or green? Arguing in favour of their 'green' status is that the emergency payments were made *ex post*, i.e. generally after planting decisions had been made. Furthermore, neither type of US emergency aid was directly linked either to prices or returns ruling at that time. Arguing in favour of their 'amber' status is that, in addition to compensation for natural disasters, US emergency payments also included 'market loss assistance payments' which were granted because market prices were perceived as being 'too low'. If farmers are encouraged to expect similar government responses in future periods of low prices, then the payments become built into farmers' expectations and contribute to higher plantings and planned production than without the payments. At the time of writing, the answer to this question remains undetermined.

The FAIR Act is due to expire at the end of 2002. A successor US farm bill will need to be in place by then. What, in the light of what has happened since 1996, is the next bill likely to look like? Will it be cast in the same 'liberalist' mould as the FAIR Act, with possible further erosion, or even the complete phasing out, of PFC-type payments and other assistance to farmers? Or will it rather treat the FAIR Act as an 'unsuccessful' experiment with farm policy liberalisation and revert to a pre-1996 type model, in which farm product price support is central?

Under a provision of the FAIR Act, a 'Commission on 21st Century Production Agriculture' was set up to make legislative recommendations to the President and Congress concerning

the future of US agriculture. The Commission's recently published report recommends that, in the new farm bill to replace the FAIR Act after 2002, PFC-type income support payments and price safety net instruments should both be retained. But, these instruments should be supplemented by a new, counter-cyclical income support instrument, termed Supplemental Income Support (SIS). Under SIS, eligible producers would qualify for supplemental payments whenever aggregate gross income from program crops falls below a predetermined proportion of the level reached during a fixed reference period. Like existing PFC payments, the proposed counter-cyclical income payments would be based upon historically determined fixed acreages and yields. In designing and recommending this scheme, the Commission hopes that the proposed new payments would be exempt from domestic support reduction commitments under the WTO, by being classified as 'green'.

A further section of the Commission's report deals with Risk Management Policy. Under this heading, it recommends the establishment of a new vehicle to encourage farmers to set aside income from 'fat' years for later use in 'lean' years. Under the proposed savings scheme, called Farm and Ranch Risk Management (FARRM), individual crop or livestock producers would be able to open a special savings account, with no minimum annual contribution or maximum account limit. FARRM savings account holders would be allowed to withdraw any amount of money at any time and, most importantly, be allowed to defer taxes on saved income until the time of withdrawal. The budget cost to the government of this scheme would arise from the cost of permitting tax payments to be deferred. The Commission claims that the support given to farmers by such a scheme could properly be classed as 'decoupled' and would thus not be trade-distorting and would qualify for 'green box' treatment by the WTO.

Both House and Senate had approved a ten-year budget resolution by the end of March 2001 incorporating President Bush's tax-cutting plans. The resolution passed by both branches of Congress allows for increased agricultural spending above what would be permitted by just a continuation of the current law, although the specific proposals of House and Senate are rather different. Given this favourable budget environment, there is now a possibility that the Agricultural Committees may attempt to rewrite the farm bill this year rather than next. A plausible suggestion is that the Republicans in Congress might seek to launch another farm bill in the same spirit as the last one. If that were so, PFC-type preset, but still further diminishing, annual payments might continue to be the main instrument of farm income support. But, in view of how commodity prices behaved in the wake of the FAIR Act, the retention of some kind of counter-cyclical income safety net instrument might also be expected, but designed to be consistent with both present and possible tighter WTO commitments.

The implications of WTO membership for China's food economy

There has been extraordinary growth in China's GDP in the post-reform period after 1979. Agriculture contributed 40 % of Chinese GDP in 1970, but its share fell to only 18 % in 1999. However, its employment share, which amounted to 81 % in 1970, remains very high at 50 % in 1999. China is still overwhelmingly rural, with 69 % of its population living in rural areas even in 1999.

Grain self-sufficiency has been central to Chinese agricultural policy and agricultural policy reform has closely reflected developments on its grain market. Over the reform period, China has moved from a position where it significantly taxed agricultural producers to one where

producer prices are close to world market levels. There are strong domestic pressures that China should follow the East Asian model and raise its trade barriers further in an attempt to maintain food, and particularly grain, self-sufficiency. The downturn in grain production and the jump in grain prices in the mid-1990s was a severe shock to the Chinese authorities and reinforced their commitment to maintain a high degree of self-sufficiency in grain. Indeed, recent policies even emphasize grain self-sufficiency at the provincial level. Since the mid-1990s, a series of measures has been introduced, including price support, in pursuit of the grain self-sufficiency objective. As a result, China has experienced bumper harvests (apart from a drought in 2000) and grain imports in recent years have almost vanished.

China is now a significant food exporter, with exports of $11.0 billion in 1999 compared to imports of $6.9 billion. China accounts for one-sixth of the world's food market despite its still relatively low per capita income. China runs a surplus on its food trade with the EU; in 1999 it exported just over $1.2 billion worth of agricultural goods to the EU, importing $0.6 billion worth in return. For most of the decade, indeed, the EU's exports to China fluctuated around a mere $0.3 billion and it is only the growth of a trade in oilseeds in 1998 and 1999 which led to the doubling of this figure in 1999.

Rapid economic growth is radically changing the economic environment for China's food production and demand and makes projections particularly uncertain. On the demand side, food consumption is being heavily influenced by the demographic changes underway, by urbanisation and by the diversification of diets which is taking place as a result of rising incomes. On the supply side, production trends are being influenced by the shift of comparative advantage from agriculture to other sectors and increased competition for resources such as land, labour and water, by technology and irrigation infrastructure investment and by changes in public policy which influence the incentives facing farmers.

The conventional wisdom is that grain markets will experience a sustained demand increase driven by growth of population (expected to reach 1.6 billion in 2020), rapid urbanisation, rising income levels and the expansion of the livestock sector (as a consequence of growing meat consumption). These factors are unlikely to be matched by compensating shifts in the supply of grains due to (i) the transition of land, labour and capital to non-agricultural uses, (ii) a slowdown in yield growth, and (iii) environmental degradation (erosion, salinisation). However, the recent forecasts published by three of the main agencies which undertake medium-range agricultural projections - the US Department of Agriculture, the OECD and the Food and Agricultural Policy Institute - indicate much more limited import growth than had previously been forecast.

China's WTO agricultural offer is a strikingly liberal one which will create a strong basis for open trade. The tariff reductions for the principal products such as grains, meats, soybean oil and cotton are much larger than the reductions required by the Agreement on Agriculture. They are also a significant reduction on the schedules tabled by China at the end of the Uruguay Round, although significant out-of-quota tariff protection will still remain for food grains. The tariff rate quotas (TRQs) are well above the current levels of China's imports (though perhaps not of imports earlier in the 1990s). However, they are sufficient to enable China to maintain its 95 per cent grain self-sufficiency objective after WTO accession should it wish to. Large shares of the TRQs will be allocated to the private sector to ensure their fulfilment. The implementation period of the commitments is five years, the developed country limit, and only half that allowed to developing countries.

An important research question is what this WTO offer will mean for China's trade flows, food security and rural incomes. The report reviews thoroughly the published studies which address this question. It concludes that there is a general agreement that, while WTO accession will lead to some increase in China's net agricultural imports, it is unlikely to have a dramatic effect on its grain self-sufficiency ratio. On the whole, there seems no reason to expect a dramatic deterioration in China's grain self-sufficiency ratio as a result of economic structural change, nor as a result of WTO accession. In the long run, it must be expected that China will more and more reveal its comparative disadvantage in grain production, leading to an eventual reduction in its grain self-sufficiency ratio. However, in the medium term, China has a number of alternative ways to promote grain self-sufficiency, including investment in research and infrastructure, liberalisation of its internal grain market and greater security of land tenure for farmers. All of these policies will continue to be available to the Chinese authorities after WTO membership.

China's impact on the current agricultural negotiations

The issues in the agricultural negotiations revolve around the three 'legs' of the Uruguay Round Agreement, namely market access, export subsidies and domestic support. In addition, a number of other issues have been raised by the US and the EU as well as developing countries, among others, including non-trade concerns such as food security and the multifunctionality of agriculture as well as food safety.

In the market access negotiations, Chinese interests in further tariff reductions will lie midway between those of the EU and the US. As an exporter, China will be keen to push for a significant further cut in tariffs in the next round. However, it will be conscious of the implications of any cut on its out-of-quota tariffs on wheat, maize and rice.

As a growing net grain importer, China will favour any moves which would enhance the *predictability* of trade flows, and would support the strengthening of multilateral rules on this issue. Under this heading, the report discusses China's attitude to restricting the practice of varying applied tariffs or allowing developing countries, including China, access to the Special Safeguard Clause. It also argues that China would have an interest in restricting tariff measures on agricultural products to *ad valorem* tariffs only.

China makes substantial use of State Trading Enterprises in its agricultural trade. However, under the terms of its Protocol of Accession, it has agreed that the share of private trade in TRQ trade will gradually increase over the period of its accession to the WTO. It has further agreed that where unfilled quota remains three-quarters of the way through the year, it must be offered to private traders if they can make use of it. Provided its experience of operating these rules is a satisfactory one, China may be more willing to further reduce the role of its monopoly STEs in the current round. However, there is some scepticism that China would be willing to give up the monopoly status of COFCO, the state company with a monopoly on grains and oilseeds trade. The EU may find it worthwhile to support the Chinese demand in this area in return for China's support for its ability to retain its current TRQ allocation mechanisms.

China will enter the WTO with no entitlement to export subsidies and thus, at first sight, would have no interest in allowing other countries to maintain them. Indeed, as an exporter of fruits, vegetables, aquatic products and intensive animal products, it may feel that it would benefit from eliminating the possibility of the use of export subsidies by its potential

competitors. However if it sees that export subsidies are paid on bulk commodities which it mainly imports, and which turn the terms of trade in its favour, it might be persuaded that there are some short-term advantages in allowing other exporters to use export subsidies. It would probably be willing to include export credits within the definition of export subsidies for the purposes of the reductions.

Assuming that China has not had significant domestic support in the base period means that it would have a zero Aggregate Measure of Support (AMS) ceiling on such support following its WTO accession. This would allow domestic support to be provided only if it complied with the criteria for inclusion in either the 'green' or 'blue' boxes or, if its support fell into the 'amber' box, up to the limits set by the *de minimis* assumptions. While this restriction may be of less significance where China has committed itself to low import protection and price support, it does have implications which concern the Chinese. One anomaly here is that the *de minimis* restrictions apply on a commodity basis whereas the total AMS ceiling restriction which all developed countries face applies on an aggregated basis across all commodities. This allows developed countries potentially to provide much higher levels of support to sensitive commodities while still staying within their AMS ceiling than developing countries will be able to do in the future. Information suggests that China's entitlement to developing country status in claiming *de minimis* exemptions for domestic support is currently one of the sticking points in the negotiations in the Working Party on its accession. Until the outcome of these discussions is clarified, it is difficult to assess China's likely stance on domestic subsidies in the future. However, as China currently makes no use of 'blue box' subsidies and is not likely to in the future, there does not appear to be any immediate reason why it should support the EU position on this issue.

China has a huge rural population, and rural development is very important to it. However, it is unlikely to have the budget resources to engage in direct payment programmes to its farmers, who account for 50 % of the population. It may, therefore, be receptive to the argument that targeted programmes to deal with environmental issues should be the preferred means as proposed by the US. It is unlikely to see merit in the argument that multifunctionality can justify price support measures to farmers. The EU has tried to make the multifunctionality argument more attractive to developing countries by suggesting that the concept could be extended to embrace their concerns with food security. However, this argument is unlikely to be acceptable to developing countries as a group who can point out that there are alternative means of achieving this end. While China might be persuaded to support the multifunctionality argument as a way of gaining concessions in other areas of more interest to it, the concept would appear to have little immediate appeal to the Chinese authorities.

The EU's concerns on animal welfare will be of concern to China. In 1998, pork output in China was 46 per cent of the world total. Due to quality and sanitary health standards China finds it difficult to gain access to developed country markets, and most Chinese pork exports go to Russia and South-East Asian markets. China may fear that greater flexibility by WTO Members to restrict imports on animal welfare grounds may limit its export opportunities for pigmeat in the future.

Whether China will want to champion special and differential treatment for developing countries will depend, to some extent, on whether China itself will expect to be covered by such exemptions or not. This issue may be decided in the ongoing negotiations on China's development status in the Working Party on its accession. Even leaving to one side WTO

practice that a country's development status has traditionally been up to that country itself to decide, on all the usual economic criteria China would qualify as a developing country. The difficulty is that the sophistication of parts of its economy, combined with its very size in absolute terms, means that China's ability to compete in particular markets and to provide real competition to developed country industries is much greater than has been the case for developing countries in the past. Existing WTO Members will want to tie down the circumstances where China will be allowed to exercise its developing country status for WTO purposes in future. There is unlikely to be any objection where China seeks longer time periods in which to adjust its laws and administrative practices to WTO rules, for similar reasons to other developing countries. However, it remains to be seen to what extent it will be able to claim the greater flexibility allowed to developing countries in terms of the rules themselves.

These speculations on China's likely interests in the agricultural negotiations have identified only a few areas where China's immediate interests are likely to coincide with those of the EU. However, negotiations are also about designing trade-offs. Understanding the strategic objectives of the other participants can lay the basis for compromises where they agree to facilitate you in return for your agreement to support them on their sensitive issues. China will enter the negotiations with a number of strategic objectives: limiting the extension of its tariff rate quotas in order to safeguard its grain self-sufficiency objective, protecting the role of its state trading enterprises, limiting the degree to which it imports world market price volatility into its own market, lowering both tariff and non-tariff barriers to its own agricultural exports, and seeking greater flexibility as a developing country with regard to domestic support. The EU may find there is little here which significantly threatens its interests. There is certainly scope for a dialogue where the EU could seek support on those issues which are central for it in the negotiations, namely, limiting the reduction in export subsidies, retaining the 'blue' box for domestic support, gaining recognition for the precautionary principle with respect to food safety, and gaining acceptance of the legitimacy of support for multifunctional agriculture.

INTRODUCTION

The present round of WTO negotiations on agriculture is a direct sequel to the 1994 Uruguay Round Agreement on Agriculture (URAA). This stipulated that negotiations for continuing the reform process should be 'initiated one year before the end of the implementation period', i.e. in 1999. However, WTO ministers later attempted to launch a further round of comprehensive trade negotiations, of which agriculture would merely form one part. The intention was to launch these more comprehensive negotiations at a WTO Ministerial Meeting scheduled to be held in Seattle in November 1999. In the event, the Seattle meeting collapsed without any agreement being reached. However, it was reported unofficially at the time that considerable progress had been made towards agreeing the negotiating mandate on agriculture. But any such agreement was lost with the collapse of the broader negotiations.

The agricultural negotiations were revived in March 2000 when, at the direction of a WTO General Committee meeting held the previous month, the Committee of Agriculture Ministers convened a Special Session and agreed a timetable for further talks. It was agreed that four further Special Sessions of the Agriculture Committee would be held between June 2000 and February 2001, at which reform proposals, and other papers tabled by participating member governments, would be received and examined. A meeting was scheduled for March 2001 to allow members to take stock of the progress of the negotiations to that date. A deadline of 31 December 2000 was set for the submission of proposals, but with flexibility for further submissions early in 2001.

In the event, by the March 2001 stock-taking meeting, a total of seven special sessions of the Agriculture Committee had been held. 125 countries (counting the EU as 15) out of a total of 140 had submitted a total of 44 sets of proposals and 3 technical submissions[1]. Of the reform proposals to date, only a few have been really comprehensive in their scope. These comprehensive proposals have been made by the US, the EU, Japan, Switzerland, Norway, Poland and Turkey, as well as by a number of developing countries, both large and small, individually and in groups. The Cairns Group of agricultural exporting countries, which played a prominent role in the URAA, has until now not submitted a comprehensive set of proposals, but only proposals on selected aspects of agricultural trade reform[2].

The seventh Special Session of the Committee on Agriculture, covering four days, took place between March 23 and 28 2001. During the first two days progress achieved in receiving negotiating proposals, as briefly summarised in the preceding paragraph, was reviewed. The third and fourth days were used to draw up a work programme for the second phase of the agricultural negotiations. The Chairman tabled a list of negotiating issues which he recommended should be accorded priority at the next two/three meetings of the Committee. These priority issues fall into 6 groups, as follows:

a) Tariffs and tariff rate quota (TRQ) administration.
b) Amber box, i.e. trade-distorting, domestic support issues.
c) Export assistance issues, including export credits and state-trading enterprises (STEs) as well as export subsidies.
d) Food security.

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[1] In the WTO, it is formally the European Communities (EC) which negotiates on behalf of the 15 member states. For ease of reference throughout this report, we refer to the EU as it is the commonly accepted usage.

[2] So far, the Cairns Group has confined itself to tabling separate position papers on the three central issues of domestic support, market access and export competition.

e) Food safety.
f) Rural development.

The negotiators will now look in greater detail at the proposals, dividing their work according to subject, so that ultimately, in a later phase, they can enter into the bargaining that will be necessary to reach a consensus agreement (WTO Press release, 27 March 2001). A timetable was agreed consisting of three further formally convened Special Session Meetings in September and December 2001, and in March 2002 backed up by three less formal meetings in May and July 2001, and in February 2002. The March 2002 meeting would formally review progress of the negotiations to that date. No target date has yet been set for the conclusion of the agricultural negotiations.

The agenda for the present round has been inherited, to a considerable degree, from the Uruguay Round. The mandate given by Article 20 of the URAA has been described as a 'tripod' whose three legs are export subsidies, domestic support, and market access (WTO, 2001a). But since the end of the UR a number of other issues have come to prominence, including 'non-trade concerns' (much emphasised by the EU, particularly on the issue of 'multifunctionality') and special and differential treatment for developing countries. Also, in the light of several recent international events concerned with animal health, such as the BSE and foot and mouth disease outbreaks in the UK and some other countries, it looks increasingly possible that the WTO Sanitary and Phytosanitary Agreement, which complemented the URAA in 1994, will be reopened. Quite apart from food safety, the issues of animal welfare and food quality have also assumed greater prominence. Another unfinished issue inherited from the URAA is the Peace Clause. This protects countries using trade distorting agricultural subsidies from being challenged under other WTO agreements, such as the Subsidies and Countervailing Measures Agreement, provided that the 'due restraint' provisions specified in the URAA (Article 13) are abided by. The Peace Clause expires at the end of 2003 and some countries, notably the EU, want to see it renewed. However, renewal may be hotly contested by others, including the US.

The WTO Director-General, Mike Moore, has recently scouted the possibility that another attempt to launch the next round of comprehensive trade negotiations might be made before the end of this year (WTO Press Release, 15 March 2001). The next annual meeting of WTO Ministers is scheduled to take place in Qatar, in November 2001, and Mr. Moore argues that, since the economic case for a new WTO round is 'compelling', it would be appropriate to launch a new round then. The EU has also made the launch of a new inclusive round of multilateral trade negotiations in the WTO framework at the 4th WTO Ministerial Conference a priority[3]. It is arguable whether re-hitching agricultural trade reform to reform in other trade areas would help or hinder the prospects for success with agriculture. On the one hand, including agriculture in wider-ranging negotiations provides opportunities for countries to trade off losses in one area against gains made in another. On the other hand, harvesting the benefits of an already reached provisional agreement on agriculture might be blocked by failure to reach agreement in other areas.

[3] This view was stated most recently in the conclusions of the Stockholm European Council on 26 March, 2001. The EU and Japan co-hosted an informal meeting of 20 countries on 27 March, 2001 to assess prospects for a round, and concluded that feeling was running in favour of launching negotiations in Qatar this November (EU Trade Directorate-General press release, 27 March 2001).

Box 1. The WTO accession process

The rules for joining the WTO are set out in the Agreement Establishing the WTO, part of the Marrakesh Final Act implementing the Uruguay Round of multilateral trade negotiations. This Agreement provides that any state may accede to the WTO 'on terms to be agreed between it and the WTO' and that decisions on accession shall be taken by the Ministerial Conference/General Council which shall approve an agreement on the terms of accession by a two-thirds majority, although in practice consensus prevails.

Negotiations over the terms of accession proceed on two fronts – multilateral consultations in a Working Party composed of all interested WTO members, and bilateral negotiations between the applicant and each major trading partner. The Working Party focuses on the general rules and principles of the applicant's protocol. It first conducts a factual examination of the trade regime of the acceding government on the basis of a Memorandum presented by the acceding government . At an appropriate moment, it moves on to negotiate the terms of accession, which relate to three main areas: WTO rules on goods, TRIPS and services. The bilateral meetings, on the other hand, focus on tariff concessions and other market access issues that will govern bilateral trade relations after the applicant has become a member, and will apply on a MFN basis to all other WTO members. Thus the accession package consists of a protocol that lists the commitments undertaken by China concerning WTO rules, a Working Party report elaborating on those commitments, and a schedule of bilateral market access commitments for trade in goods and services. Following the General Council's adoption of the report and protocol, the acceding government becomes a Member of the WTO thirty days after it accepts its Protocol of Accession.

The US is a key player in the current (Millennium) Round of agricultural trade negotiations and has been at the forefront of calls for further agricultural trade liberalisation in this round. At the same time, the intent of its domestic farm legislation (the Freedom to Farm Act 1996), which was designed to prepare US farmers for a more market-oriented policy environment, has been undermined by substantial direct and production-linked subsidies to farmers in the four years since 1998. A key issue for this study is how the rhetoric of the US in international trade forums can be reconciled with its domestic policy stance, and what the developments in US domestic farm policy over the past four years might imply for changes in the US negotiating position in the WTO in the future.

Further complexity is added to this volatile negotiating process by the prospect of China's accession to the WTO in the near future and becoming a participant in these negotiations. China was one of the 23 founding members of the GATT in 1948, but withdrew in 1950 after the formation of the People's Republic. It has been seeking to rejoin since 1986, and was invited to take part in the Uruguay Round as an observer. It has adopted a series of liberalisation measures in recent years to accelerate its market-oriented reform and to promote its bid for GATT/WTO readmission. However, the political unrest of 1989 dampened the enthusiasm of the West to embrace China. Despite numerous accession meetings during the Uruguay Round and further meetings after the WTO was formed, no progress was made on its accession. The re-admission process is a complex one, not least because of the huge importance of China for world trade (where it is currently around the tenth largest exporter and importer). Meanwhile, China has insisted that Taiwan not be allowed to join before it accedes.

China has made WTO accession a priority for a number of reasons. It will represent international recognition of China's growing economic power, particularly following the political isolation after 1989. WTO membership is part of a broader strategy to lock in a difficult transition from communism to a market economy. Domestically, it would make it easier for Chinese reformers to push for liberalisation policies if they could argue that such steps are necessary to fulfil China's international obligations. Accession will give China better access to foreign markets, reflecting its growing interest in and dependence on exports. In particular, it would gain the expanded market access available to WTO members under the Textiles and Clothing Agreement. It would gain MFN status with the US and no longer have to plead its case each year for MFN access. It would give China access to the dispute resolution process in the WTO, reducing the threat of unilaterally imposed restrictions on Chinese exports such as Section 301 of US trade law. At the same time, increased openness to imports will keep down increases in the cost of living, give greater choice for consumers and encourage greater productivity of resource use. It will also enable China to play a major role in the development of new international rules on trade in the WTO.

Having been unable to become a WTO founding member in 1995, interest waned until US and Chinese officials reached agreement on China's terms of accession on 15 November, 1999. The full text of this agreement was released by the Clinton Administration on 14 March, 2000[4]. The EU subsequently reached its bilateral agreement with China on 19 May 2000[5]. China has now reached agreement with nearly all of the 37 individual WTO members which sought negotiations on the bilateral concessions it must make to gain entry (of course, under the WTO's MFN rules, any bilateral concession must be subsequently offered to all other WTO members). Once all these bilateral agreements have been filed with the WTO Secretariat (which can take several months from their signature), then the Working Party on China's Accession will prepare the Schedules of Concessions on Goods and the Schedule of Commitments on Services, which reconcile and consolidate the results of the bilateral negotiations and which comprise annexes to the final Protocol of Accession.

The multilateral process was relaunched in Geneva in June 2000 with the resumption of the work of the WTO Working Party on China's Accession. Since that date the Working Party has met seven times, most recently in January 2001, and important progress has been made towards finalising the multilateral commitments that China will accept in its Protocol of WTO accession and the annexed Working Party report. Issues where progress has been reported include judicial review, uniform administration and transparency, product specific safeguards, non-tariff measures and anti-dumping, tariff rate quota administration and a transitional review mechanism. Work continues on other subjects such as agriculture, industrial subsidies, technical barriers to trade, trading rights and trade in services[6]. Although WTO Members were unable to agree on the accession terms by the end of 2000 as was originally hoped, it is now anticipated that Chinese membership will be agreed in the course of 2001.

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4 The full text of the agreement can be found at http://www.uschina.org.

5 Highlights of the EU-China agreement can be found at http://europa.eu.int/comm/trade/bilateral/china/high.htm.

6 WTO Secretariat background note on 'China's accession to the WTO and its relationship to the Chinese Taipei accession and to Hong Kong and Macau, China' prepared March 2001 and available on the WTO website www.wto.org.

Domestic legislative pressures in the US could complicate the negotiating process. Under the 1974 Trade Act, the Jackson-Vanik amendment requires that the Normal Trade Relations (NTR) status (equivalent to WTO most-favoured nation status) the US grants to non-market economies, including China, be subject to an annual review of their emigration policies. Last year, the US Congress passed legislation granting China Permanent Normal Trading Rights (PNTR) (the legislation was passed by the House of Representatives on 24 May, 2000 by a vote of 237-197 and by the Senate on 19 September, 2000 by the more comfortable margin of 83-15). However, if China does not gain WTO accession by June 2001 and if President Bush has not certified that the entry terms are at least as good as the bilateral agreement reached with China in November 1999, then the current US law that requires annual renewal of normal trade relations status remains on the books. Refusal by the US to renew NTR status could not prevent China from becoming a WTO Member, but it would require the United States to invoke the WTO's non-application provisions toward China contained in Article XIII of the Final Act of the Uruguay Round. The notice to non-apply would have to be delivered prior to the time the WTO General Council meets to approve the terms and conditions of China's membership. China, in turn, would then almost certainly invoke Article XIII with respect to the United States, meaning that US firms would not benefit from the trade concessions contained in China's Protocol of Accession.

This report focuses on the implications of China's entry into the WTO for the ongoing agricultural negotiations, and in particular on the impact its accession may have for the alliances that may be formed between the principal participants in the negotiations: the EU, the US, the Cairns Group and Japan. The key elements in the terms of reference are as follows:

> 'With regard to the section dealing with US agricultural policy and its compatibility with WTO rules… the terms of [the Marrakesh] agreement, the agricultural policy measures adopted by the US since Marrakesh, and the official US declarations and depositions to the WTO, should be examined. The conformity of US commitments, statements and actions with WTO rules should be analysed, and contradictions described […]
> With regard to the section examining the effects of Chinese membership on the negotiations, an overview of the current food production and agricultural situation in China should be used as a basis for forecasting the likely evolution over the coming 10 years. From this base, the study should investigate two aspects:
> - How will Chinese membership of the WTO affect relations (confrontation/commonality of interests) between the principal traditional participants in the negotiations (Europe, US, Japan, Cairns Group)? The main product markets, as well as more general aspects such as income support, multifunctionality of holdings, price supports, export subsidies, etc. should be examined. The study should indicate where China could, objectively, ally itself with European interests.
> - What are the possible effects of Chinese membership of WTO on international markets for agricultural products, and on China's own imports and exports (for the principal products that interest the EU)? As far as possible, the likely effects on prices and volumes traded should be analysed.'

The remainder of this report responds to these terms of reference and is divided into three chapters as follows:

- Chapter 1 of the report discusses the policy background to the United States' position in the current negotiations. It examines recent agricultural policy changes in the US and the likely outcome for the next Farm Bill, preparations for which have already started in the US Congress.
- Chapter 2 discusses recent agricultural policy developments in China. It describes what is known about the details of China's WTO accession offer on agricultural trade, and it evaluates the growing literature on what China's WTO membership might mean for China's agricultural trade and world commodity markets.
- Chapter 3 examines the main issues at stake in the current round of agricultural trade negotiations. The principal objective of this chapter is to identify those areas where China's interests are likely to coincide with the EU's, and where those interests are likely to differ.

CHAPTER 1.
BACKGROUND TO THE US POSITION IN THE AGRICULTURAL TRADE NEGOTIATIONS[7]

This chapter of the report is divided into five subsections dealing with:

a) Background information on recent trends in production, exports, farm incomes, farm product prices and the relative importance of agriculture in the US.
b) Review of US objectives and achievements for agriculture in the Uruguay Round of multilateral trade negotiations, concluded in 1994.
c) Major changes in US farm policy since the end of the Uruguay Round.
d) Preparations for the next US farm bill.
e) Critique of recent US farm policy developments in the light of its WTO commitments.

1.1. Recent developments in the US farm economy

US farm prices in the immediate aftermath of the Federal Agricultural Improvement and Reform (FAIR) Act of 1996 were mostly relatively high. But shortly thereafter, until the end of the decade, they were on a declining trend (see Table 1 for the statistical evidence for the statements made in this section). Thus, the all farm products price index, with 1990-92=100, fell from 112 in 1996 to only 95 in 1999. The price of wheat, the single most important US export commodity, fell from $4.30 per bushel to only $2.55 per bushel over the same period. The prices of corn and soybeans, also major export crops, showed similar declines[8]. The decline in farm product prices was *not* matched by much reduction in production. The production of wheat fell a little after 1998, but the production of corn and soybeans both increased quite markedly between 1996 and 2000. Tillage crop acreage statistics indicate that, between 1996 and 2000, there was virtually no change in the total area planted, although some transfer of land amongst crops appears to have occurred. In particular, the area planted to soybeans increased at the expense of the wheat area, which declined (Ray, House Committee on Agriculture, 2001)[9].

Nor was the decline in farm product prices during the late 1990s matched by a commensurate fall in farm input prices. The index of the ratio of prices received to prices paid by farmers fell from 98 in 1996 to 83 in 1999. The reasons for these price declines included a low global rate of economic growth (except in the US), a strong US dollar, and a weakening of agricultural export demand, particularly in SE Asia and Japan, where severe macroeconomic problems had very adverse effects on wages, employment and exchange rates (Collins, US Senate Agriculture Committee Hearing, 30 January, 2001). There is also evidence that, in the mid-1990s, grain prices were buoyed by low stocks owing to a succession of sub-normal harvests caused by drought. Then, as stocks became replenished, prices receded (Ray, 2001).

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[7] The authors gratefully acknowledge the assistance of Dr Joseph W. Glauber and a number of his colleagues at the United States Department of Agriculture, Economics Research Service, for guidance and advice with the preparation of this chapter.

[8] The declines in the prices of wheat and corn were proportionately greater than the decline in the 'All Farm Products' price index, suggesting that the downward price trend for export crops was particularly marked.

[9] This reallocation of land amongst crops appears to have been in response to support adjustments embodied in the 1996 FAIR Act, referred to in some detail later in this report. The stickiness of production in response to falling product prices, particularly in the short-run, is a classic characteristic of agriculture everywhere in the world, including the US.

Table 1. Trends in Production, Exports, Farm Incomes and Farm Prices, 1996-2000

	1996	1997	1998	1999	2000
Agricultural Production					
Total gross value ($bil.)	228.4	230.9	221.0	214.9	222.2
Total net value added ($bil)	86.7	83..5	74.8	69.8	n.a.
Wheat (mil. Bu)	2277	2481	2547	2299	2223
Corn (mil. Bu)	9253	9207	9759	9437	10054
Soybeans (mil. bu)	2177	2689	2741	2654	2777
Exports					
Total value ($bil.)	59.9	57.4	53.7	49.2	50.9
Wheat: $bil	7.0	4.3	3..9	3.8	3.5
m. tonnes	33.7	24.9	25..9	28.8	27.8
Corn: $bil	8.4	6.1	4..3	5.0	4.6
m. tonnes	52.7	46.6	37.8	51.9	49.4
Soybeans: $bil.	6.3	7.0	6.1	4.8	5.1
m.tonnes	22.4	24.1	23.4	23.0	26.1
Farm incomes					
Total net farm income ($bil)	54..9	48.6	44.6	43.4	45.6
Total no. of farms (mil.)	2.190	2.190	2.191	2.194	n.a.
Land in farms (000 acs.)	958.7	956.1	953.5	947.3	n.a.
Farm sector employment (mil)	2.0	1.9	1.8	1.7	n.a.
Farm prices					
Prices received: All farm products, 1990-92=100	112	107	101	95	92(Oct)
Wheat $/bu	4.30	3.38	2.65	2. 55	2.70(Oct)
Corn $/bu	2.71	2.43	1.94	1. 90	1.74(Oct)
Soybeans $/bu	7.36	6.47	4.93	4.75	4.36(Oct)
Ratio of prices received/prices paid (%)	98	90	88	83	76(Oct)

Sources: USDA, ERS, *Agricultural Outlook, Agricultural Income and Finance Situation and Outlook, Outlook for US Agricultural Trade, Outlook for US Agricultural Exports, Wheat Yearbook,* various issues.

With the overall level of farm production remaining static, but with farm product prices and the ratio of prices received to prices paid both falling, there occurred a marked downward trend in farm incomes. Between 1996 and 1999 total net farm income in the US fell from $54.9 billion to $43.4 billion, before recovering slightly to $45.6 billion in 2000. Whilst the total number of farms remained roughly constant and the total land area in farms declined only slightly, total farm sector employment fell from 2.0 million in 1996 to 1.7 million in 1999. Thus, although the evidence suggests some decline in net income *per farm* during this period, net income *per person employed* on farms fell proportionately less.

There are currently around 2 million properties classed as farms in the US, where a 'farm' is defined as any place that sells $1,000 worth or more of commodities per year. However, only a small minority of farms, so defined, are commercial enterprises. A recent reclassification of US farms, based solely on commodity sales volume, identified only 157,000 commercial

farms, defined as households depending primarily on agriculture for their income. Such farms, with annual sales exceeding $250,000, represent only about 8 percent of all farms, but they account for 72 percent of total farm production. Their annual sales have recently averaged just over $900,000 per farm. At the other end of the scale the re-classification reveals the existence of no less than 1.6 million 'non-farm farms' with sales of less than $100,000, averaging less than $16,000 per annum. Households living on such places derive virtually all their income from non-farm sources. Thus, from the point of view of agriculture's contribution to the US economy, to view the farm sector as consisting of 2 million farm businesses is very misleading. Commercial farm enterprises, with which agricultural policy is primarily concerned, represent less than one fifth of this number (Penn, 2001).

What is the relative importance of agriculture in the US economy? The answer to this question depends upon how agriculture is defined. Restricting the definition to the farm sector as such, this now accounts for less than 1 percent of US GDP and only about the same proportion of national employment. But if the definition is broadened to include all the ancillary industries associated with farming which together comprise the 'food and fibre sector' of the US economy, the GDP contribution rises to about 13 percent, and the national employment contribution to about 17 percent (Lipton et al, 1998). These ancillary industries include those from which farmers purchase non-farm inputs, such as fertilisers, pesticides and machinery. These are termed 'upstream' industries. But, even more importantly, the ancillary industries also include those which are 'downstream' from the farm sector, i.e. all the industries concerned with the processing, packing and distribution of food and fibre, from the farm to the final consumer. On the basis of this broader definition, US agriculture still accounts for a quite significant proportion of the national economy. This fact, combined with other factors such as a continuing widespread belief that farming is the most basic of industries, helps to explain why the farm lobby in the US continues to exert a much larger political clout than the mere number of farmers and farming's narrowly defined contribution to the national economy might otherwise suggest.

1.2. Review of US objectives and achievements for agriculture in the Uruguay Round of multilateral trade negotiations[10]

The US position in the current negotiations can be fully understood only against the background of the Uruguay Round of GATT negotiations, starting in 1986 and ending in 1994. The US was the main driving force behind the launching of the Uruguay Round. Compared with earlier GATT rounds, the greater liberalisation of agricultural trade was this time a major objective from the outset. In the Punta del Este Declaration, which launched the Uruguay Round, it was stated that:

> Negotiations shall aim to achieve greater liberalization of trade in agriculture and bring all measures affecting import access and export competition under strengthened and more operationally effective GATT rules and disciplines……

After the actual negotiations started, the US was first in the field with a radical proposal that all agricultural production and trade subsidies, and all agricultural import barriers, should be phased out over 10 years. The US recognised that some classes of farm income support, such as direct income subsidies not linked to production or marketing (i.e. so called 'decoupled'

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10 This section, and the next one, draw particularly heavily on Ingersent and Rayner (1999).

payments), and *bona fide* food aid programmes, might be exempted from the phasing out process. But all instruments of agricultural support, other than decoupled payments, would have to go. In the simplest terms, the US wanted the removal of all tariff and non-tariff barriers to agricultural imports, as well as abolition of agricultural export subsidies and domestic subsidies linked to production and marketing, within 10 years. This radical US proposal came to be termed the 'zero option'.

This zero option was lent some support by the Cairns Group (CG) of 14 agricultural exporting countries. But the CG was prepared to be more flexible than the US, particularly in the time allowed for completing the process of agricultural trade reform. But in contrast to the CG, other negotiating parties, particularly the EC, Japan and the Nordic countries, were much more hostile to the US position. Indeed, apart from the CG stance, the reaction to the US proposal was sufficiently adverse to virtually stall the negotiations on agriculture for several years. The stalemate persisted despite strong efforts by the then GATT Secretary-General, Arthur Dunkel, to break it, culminating in the Geneva Accord of April 1989. The text of the GA contained no reference to the *elimination* of trade-distorting support and protection but only to its progressive reduction[11].

Eventually, in October 1989, the US tabled a revised position paper on agriculture, proposing the conversion of all non-tariff barriers (NTBs) to expanding tariff quotas in the short run, and simple tariffs after 10 years. The 'zero option' (implying *inter alia* zero tariffs on all farm products after 10 years) was not explicitly abandoned at this stage. But a year later, at the end of 1990, shortly before the date at which it had originally been intended to conclude the UR, the zero option was formally abandoned, when the US tabled a paper proposing a 90 percent reduction in export subsidies and a 75 percent reduction in domestic support and border protection over 10 years.

Also at the end of 1999, GATT Secretary-General Dunkel acted to break the stalemate by tabling a draft 'Final Act', covering all areas of the negotiations. This included a Draft Agreement on Agriculture (DAA), containing suggested explicit provisions concerning each of the three most contentious issues of improving market access, reducing domestic support and reducing export subsidies. Although Dunkel proposed significant support reductions in all of these areas, over an implementation period of six years (rather than 10 years, as originally proposed by the US), they all fell considerably short even of the less radical of the two sets of US proposals. Although the US and most of the CG countries were prepared to accept the DAA as the basis for concluding negotiations, the EU continued to hold back, particularly from being tied to any specific commitment to reducing export subsidies. However, the negotiations moved forward again following internal EU agreement on CAP reform in May 1992. The renewed negotiations took the form of bilateral negotiations between the EU and the US to resolve outstanding disagreements on agriculture. The EU sought to ensure that any accord with the US be compatible with its recently concluded CAP reform, whereas the US wished to minimise concessions to the EU involving departures from the terms of the DAA.

The effect of the so-called Blair House Agreement (BHA), concluded between the EU and the US in December 1992, was to amend the DAA in certain respects. On improved market

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[11] To be fair to the US, the early paralysis of the UR agricultural negotiations might also be attributed to the EU's lack of commitment to radical external trade reform pending the conclusion of necessarily linked domestic reforms of the CAP, which were not finally agreed by the EU Council until 1992.

access, the EU agreed to conform to the terms of the DAA, subject to the inclusion of a 10 percent Community Preference margin in all its tariff equivalent calculations. On domestic support reduction, the EU succeeded in negotiating two important concessions. First, although under the DAA, direct payments generally were to be subject to progressive reduction, those made under production limiting programmes might be exempted from reduction provided, either that payments were based upon a fixed crop area and yield, or restricted to 85 percent of the base area of production, or that livestock payments were based upon a fixed number of animals. Second, the BHA weakened a DAA-recommended commitment to bind and reduce domestic production subsidies. Whereas the DAA recommended that these reduction commitments should be commodity specific, under the BHA it was agreed that an aggregate reduction commitment, embracing all supported commodities, would suffice. Allowing for adjustment of support payments amongst commodities, it would clearly be easier to remain below an aggregate ceiling than to ensure that individual commodity payment limits were respected.

The loosening of restrictions on domestic support payments agreed between the EU and the US under the BHA suited the EU very well. Under the 1992 reform of the CAP, the main emphasis of domestic farm support had shifted away from market intervention to maintain domestic prices, to fixed area payments based upon the product of the difference between the 'old ' and 'new'(lower) intervention price and a fixed 'historic' yield. Thus the effect of the BHA accord on domestic support limitation was to virtually exempt new-style EU support payments from any reduction commitments[12].

The BHA accord to exempt domestic support payments from reduction commitments under specified conditions also suited the US, under the farm support regime prevailing there in 1992. At that time deficiency payments, to bridge the gap between preset producer prices and market prices, were the principal instrument of farm income support in the US. Thus the BHA effectively exempted US deficiency payments, as well as EU direct 'area payments' and animal premia, from reduction commitments.

As well as adjusting DAA provisions on improved market access and domestic support reduction, the BHA also included some minor adjustment of provisions concerning export subsidy reduction commitments, to suit the EU. Also included was the so-called 'Peace Clause' guaranteeing that, provided that a member country's domestic support reduction measures fully conform with its Agreement commitments, it is protected from hostile action by its trade competitors, such as the imposition of countervailing duties on exports not causing injury, provided total support does not exceed 'that decided in the 1992 marketing year'. Although, to the lay observer, the Peace Clause looks like a legal minefield, it is generally viewed as guaranteeing immunity from hostile actions by trade competitors providing that a contracting party's overall costs of agricultural support do not exceed the level reached during the 1992 marketing year, under regulations then prevailing. The Peace Clause is thought to have been included in the BHA at the insistence of the EU. Its central

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[12] In WTO jargon, domestic support payments fall into three categories. First, payments that are production and price related are classed as 'amber' and subject to progressive reduction. Second, those complyng with the restrictive conditions defined by the BHA fall in the so-called 'blue box'. Third, decoupled payments, i.e. government payments considered not to significantly affect farmers' production decisions, such as public expenditure on agricultural R and D, are classed as 'green box'. Green box payments were exempt from reduction under the DAA (as well as under the actual Uruguay Round Agriculture Agreement reached later). The effect of the BHA was to exempt blue box payments from restrictions identically with green box payments.

implication appears to be that, despite the exemption of domestic production subsidies from reduction commitments, subject to restrictive conditions specified by the BHA, an overall ceiling on government payments in support of agriculture ultimately remains, as specified by the Peace Clause.

The DAA-BHA effectively resolved most of the outstanding disagreements on agriculture between the EU and the US. But, during the final stages of the Uruguay Round negotiations, some further minor adjustments were made to the draft Agriculture Agreement. These mostly concerned the phasing of export subsidy reductions and country-specific derogations from the terms of the market access agreement. These were made either at the behest of individual EU member states (particularly France), or to secure the assent of countries outside Europe or America, such as Japan. Two more years elapsed before these problems were finally resolved, allowing the Final Act of the Uruguay Round to be signed on 15 April 1994. The Final Act included, not only the text of the Agriculture Agreement, but also the Country Schedules detailing the commitments on agriculture entered into by each of its signatories.

As finally passed, the most salient features of the Uruguay Round Agriculture Agreement (URAA) were:

- Market access to be liberalised by reducing all base period tariffs by an unweighted average of 36 per cent over six years, with a minimum 15 percent reduction in each tariff line. All import quotas and other non-tariff barriers (NTBs) to be converted to tariffs before being reduced in a parallel fashion[13]. Minimum access of 3 percent of domestic consumption, rising to 5 percent of domestic consumption at end of implementation period, was to be provided. Minimum access provisions cannot start lower than the actual level of base period imports. EU tariffs permitted to include an additional 10 per cent Community Preference margin.
- Agricultural export subsidies still to be permitted, but subsidy expenditure to be cut by 36 percent and export subsidy volume by 21 percent over six years, both types of cut being commodity specific. Exports of food aid exempt from reduction.
- Domestic support to be reduced by 20 percent in aggregate across all supported commodities, from a 1986-88 base, over six years; but green box and blue box instrument support both exempted from reduction.

The URAA also contained special provisions for developing countries. Generally speaking, these reduced the depth of the required reduction in support and increased the length of the implementation period (from six to ten years).

The Uruguay Round outcome can now be evaluated from the US perspective. It embarked upon the Uruguay Round with very ambitious objectives for the worldwide liberalisation of agriculture – the zero option. But, after seven years of negotiations, America decided to settle for much less than had originally been sought. Access to foreign markets for farm exports was certainly improved by the tariffication of NTBs and by the commitment to reduce tariffs to lower levels. But substantial agricultural tariff barriers remained, even after the agreed cuts had been made. Similarly, the agreed cut in domestic support would, by helping to curtail surplus domestic production, also help to expand the demand for imports from competitors. But, at only 20 percent, the agreed cut remained quite small. Moreover, the cut required was not commodity specific, leaving scope for getting away with lower, or even

[13] The guidelines prescribed in the agreement for the calculation of base period tariff equivalent (TE) levels were somewhat loose. Consequently, some base period TEs shown in national schedules of reduction commitments appeared very high, at several hundred percent.

zero, support reductions on selected commodities. As for subsidised agricultural exports, despite the agreement, these remained legal under WTO rules, unlike subsidies on non-agricultural exports.

Why, in the end, was the US prepared to settle for such modest gains on agriculture, compared with its original objective of phasing out all trade-inhibiting government support of agriculture within ten years? One answer to this question is that the US needed to sign up to a GATT Agreement which included agricultural reform, for the simple reason that such reform had been at the head of the American agenda for the round from the beginning. A second answer is that the zero option was no more than an opening negotiating ploy, and when it failed, due to the implacable opposition of the EU and other negotiating parties, it was ready to settle for less. A third answer is that the Uruguay Round agenda extended to many issues other than agriculture, such as tariffs and NTBs generally, textiles and clothing, tropical products, trade-related intellectual property rights (TRIPs), trade-related investment measures (TRIMs) and GATT rules and disciplines. To have abandoned all potential gains from reaching a settlement in these other areas, for the sake of failing to fully achieve all that had been originally sought in reforming agriculture, would have been unwise. All three of these considerations probably contributed to the final US decision to settle for a relatively modest agreement on agriculture. However, the turning point did not occur until quite late in the negotiations. The US did not formally abandon the zero option until tabling its final position paper on agriculture at the end of 1989. Even then, the US still sought a 90 percent reduction of subsidised exports and a 75 percent reduction in domestic support and border protection over ten years, both far in excess of the terms of the final settlement.

1.3. Major changes in US farm policy since the end of the Uruguay Round [14]

1.3.1. The 1996 FAIR Act

In the US the broad parameters of agricultural policy are laid down by periodic farm bills legislated by the Congress. Thus, policy at a particular date is determined by the current farm bill. In recent times it has been customary for a new farm bill to be introduced, debated and passed shortly after each new presidential administration takes office. President Clinton's second administration took office in 1995 and a new farm bill was due to be tabled in Congress and passed later that year. In the event, for party political reasons, the first US farm bill following the Uruguay Round Agreement of 1994 was not passed until 1996.

The Federal Agricultural Improvement and Reform (FAIR) Act of 1996 was drafted and debated against a background of three recent developments: (i) US ratification of the URAA; (ii) agricultural export market trends; (iii) federal budget constraints. On the first aspect, the commitment to remain within the prescribed commodity specific export subsidy limits was probably the most critical for the US. Thus any policy measures tending to drive a'wedge' between the domestic and world market prices of export commodities would need to be examined critically. The risk of projected exports overshooting the prescribed limits before the end of the agreement implementation period appeared to be most critical for wheat, rice and eggs. On the second aspect, current export market price levels and their likely trends during the currency of the new farm bill were clearly important. At the time (1995-96) the export market prospects for most commodities were good, with prices riding high, i.e. higher than they had been during the late 1980s and early 1990s. On the third aspect, given an

[14] This section draws heavily on Orden, D. et al. (1999)

overall constraint on the size of the federal budget (imposed by broad considerations of macroeconomic policy) it was highly likely that the federal budget for agriculture was going to be cut. The President's declared objective in 1995 was either to eliminate the federal budget deficit or at least to sharply reduce its size, and agriculture could hardly expect to escape unscathed by this decision.

In May 1995 the Administration published a document laying down guidelines for the new farm bill. Somewhat surprisingly, the tenor of this document was rather cautious, amounting to little more than a continuation of the *status quo*. In particular, although it recommended policy adjustments to give farmers more freedom to respond to market forces, deficiency payments would remain in force as the principal instrument of price support. In other words, US farmers would continue to be guaranteed a minimum or 'target' price for their output. If the market price fell below the target price, the difference would be made up with a deficiency payment (DP) per unit marketed. Theoretically, a DP may viewed as a price wedge which encourages farmers to produce in excess of market demand, as signified by the market price.

These cautious guidelines for drafting the new farm bill were soon upstaged by a much more radical set of proposals from within Congress itself. Congressman Pat Roberts (Republican), Chairman of the House Agriculture Committee, tabled a draft bill that became known as the Freedom to Farm Bill (FFB). The central thrust of the FFB was that deficiency payments should be replaced by preset annual payments to eligible farmers. These payments would be limited to seven years and would taper off somewhat over that period. Moreover, for the first time since the early 1930s, US farmers would have virtually complete freedom of cropping: they would no longer have to agree to set aside a proportion of their land (i.e. remove land from cultivation) in order to qualify for government payments. Then, rather to the surprise of many observers, after some fairly minor modifications in response to bargaining between the Republicans and Democrats, the FFB eventually formed the basis of the FAIR Act, voted through both houses of Congress and signed by the President on 4 April 1996[15]. We defer, for the moment, attempting to answer the question, 'Why did the 1996 US farm bill turn out to be much more radical than most informed observers originally expected ?'

The core feature of the 1996 FAIR Act, with a life of seven years, was the so-called Agricultural Market Transition Program (AMTP). The two central aspects of this were 'contract payments' and 'planting flexibility'.

With the introduction of contract payments, target prices and deficiency payments ceased to exist, and participants in the new 'production flexibility contracts' (PFCs) became entitled to receive fixed annual payments[16]. These PFC payments were considered to be decoupled, i.e. divorced from current production decisions, and were scheduled to decline by 40 percent between 1996 and 2002. AMTP participants were not committed to any current agricultural production in return for PFCs currently received, but could not remove their contract acreage (CA) from agriculture altogether, by transferring it to a non-agricultural use.

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[15] At the time, the President was said to have signed the bill with some reluctance, on the ground that it failed to give farmers an adequate income *guarantee* (our italics). This was to have repercussions later.

[16] At the farm level, the due amount of a contract payment (PFC) was calculated by combining (i) the contract acreage (CA), fixed by participation in past support programs, (ii) a notional fixed crop yield (PPY), based on recent history, (iii) the so-called 'payment rate per bushel' (PR), fixed arbitrarily to ensure that the total cost of the programme did not exceed the budgetary ceiling imposed by federal legislation already passed in November 1995. Then PFC=CA*PPY*PR.

However, under the AMTP, a price 'safety net' remained for US farmers. This took the form of so-called 'non-recourse marketing assistance loans'(MALs), carried over from earlier farm support programs. A producer taking out an MAL contracts to repay the loan at the lower of *either* the market price at the time of repayment, *or* the 'loan rate'. The loan rate is preset, by the Secretary of Agriculture, acting for the federal government. It is normally set well below the price level expected to prevail during the currency of the program[17], i.e. it is supposed to be no more than a price of last resort.

The second aspect of the AMTP, 'planting flexibility', abolished set-aside participation as the *quid pro quo* for farm income support. AMTP participants were to be allowed complete freedom of cropping on their CA, except for horticultural crops and cross-compliance with other land use restricting programs, particularly the Conservation Reserve Program (CRP)[18]. There is evidence that the planting flexibility provision resulted in some significant resource shifts amongst major crops in the late 1990s. More precisely, there appears to have been a shift out of wheat, the production of which markedly declined after 1998, into the production of corn and soybeans, both of which increased (Table 1).

1.3.2. Evaluation of the FAIR Act (or, why it got through Congress)

In substituting decoupled payments for farm price support (other than marketing loan assistance), the FAIR Act of 1996 was a radical departure from all previous US agricultural policy. In order to understand more recent US agricultural policy initiatives, the question of why such a revolutionary farm bill got through Congress at that particular time needs to be addressed. There are two major clues to answering this question. First, as stated earlier in this report, in 1996 agricultural commodity markets were mostly buoyant, as signified by relatively high farm product prices. Moreover, at that time, market prospects for the short and medium terms appeared to be good. Economic projections for the farm sector gave considerable weight to the so-called 'dynamic gains' from the Uruguay Round Agreement. The idea here was that freer trade would generate higher incomes, which would in turn result in a growing demand for food and other agricultural products, particularly in developing countries. So the prospects for US agricultural exports in particular appeared to be rosy. The second clue to why such a radical farm bill got through Congress in 1996 is concerned with how PFC payments, introduced under the AMTP, differ from the deficiency payments that they replaced. Under a PFC payment regime, the payments are made every year, regardless of the level of market prices. But, under a DP regime, farmers benefit by receiving payments only when the market price falls below the preset target price. Should the market price rise above the target price, no government payments to farmers are due. Making the same point in a slightly different way, whereas DPs are a counter-cyclical instrument of farm income support, PFC payments are not.

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[17] In the case of export commodities, the expected US price is effectively the world market price. Thus, in presetting the loan rate, the Secretary of Agriculture must anticipate future world price levels.

[18] Under the CRP, designed primarily to control soil erosion, US farmers contract with the federal government to remove land from the cultivation of soil-depleting crops for a long period of years in return for a subsidy. This contrasts with the Acreage Reserve Program (ARP) which, prior to 1996, was extensively used by the Federal Government as an agricultural supply control instrument. Thus the ARP was used to encourage farmers to withdraw/return land from/to cultivation, in attempting to stabilise the market (rarely with much success!). Although, conceptually, the aims of the CRP and the ARP were distinct, their implementation tended to become confused, with some non-erodible land getting into the CRP and erodible land into the ARP.

We now come to the reason why, in 1995, Congressmen, even those with special responsibilities towards agriculture, were prepared to back such a radical new farm bill. In effect, they gambled upon farm prices remaining relatively high for the duration of the new legislation. If this gamble were successful, farmers would enjoy the dual benefits of receiving high prices plus the PFC payments. All other things being equal, this was clearly the superior option to one of remaining with the old DP regime, under which no deficiency payments would be made in years when market prices were high. But, what if the gamble were unsuccessful, i.e. market prices did not remain high? In that event, experience suggested that the federal government would probably yield to pressure for farmers to be granted emergency financial assistance.

An interesting sidelight on the successful passage of the FAIR Act in 1996, as well as on Representative Pat Robert's pioneering Freedom to Farm Bill which preceded it, is that a very similar, but earlier, Congressional initiative had failed. In 1989, during the debate preceding the passage of the 1990 Farm Bill, the Boschwitz-Boren Bill (named after its two principal senator authors) proposed the abolition of deficiency payment support in favour of decoupled payments to farmers. However, this revolutionary farm policy proposal failed to attract Congressional endorsement at that time. The reasons for the rejection of the Boschwitz-Boren Bill in 1989 are speculative. But, at that time, the Uruguay Round was still four years short of its conclusion. Thus, to the extent that the conclusion of the trade liberalising UR in 1994 contributed to Congressional endorsement of the Freedom to Farm Bill and the actual FAIR Act some two years later, we may have an explanation of why a revolution which failed in 1989 succeeded in 1996. In the event, of course, the successful conclusion of the UR did not guarantee US farmers against unfavourable movements of farm prices and in farm incomes, as experience was to show quite shortly.

As shown in Table 1, the high farm prices reached in 1996 were not repeated in the next few years. So, for example, the price of wheat fell from $4.30 per bushel in 1996 to only $2.65 by 1998, and even lower in 1999. Unsurprisingly, farm incomes followed the same trend, declining from a total of about $55 billion in 1996 to only about $45 billion in 1998. Considerable pressure was exerted on the federal government, by a well organised farm lobby, to act in response to these trends. These representations were eventually successful and resulted in two Emergency Appropriations Acts. The first of these, passed in 1998, was worth $6 billion to farmers and paid out during the 1999 fiscal year (October '98 – September '99). The second one, passed in 1999, was worth $9 billion and paid out during FY 2000. Then, in 2000, an Agricultural Risk Protection Act was passed, worth $5.5 billion in FY 2000, and $1.6 billion in FY 2001 (Glauber, 2000)[19]. It is now apparent that, in 1999, total PFC payments, under the FAIR Act ($5.046 mil.) were exceeded by both total loan deficiency payments ($5.894 mil.) and total 'emergency assistance' payments ($7.804 mil.). Provisional figures for 2000 suggest that, in that year, the ratio of total *ad hoc,* or unplanned, to planned payments to agriculture was even higher than in 1999 (Table 2).

An interesting aspect of recent US emergency assistance payments to agriculture is the domestic support payment category in which they should be placed for the purpose of notification to the WTO. Are they amber, blue or green? Arguing in favour of their 'green'

[19] The federal government has, for some years, subsidised the premiums paid by farmers to insure against crop failure. The subsidy arrangements are refinanced, and the terms varied, from time to time. The subsidy encourages farmers to grow crops in risky situations that they would otherwise avoid.

status is that the emergency payments were made *ex post*, i.e. generally after planting decisions had been made. Furthermore, neither type of US emergency aid was directly linked either to prices or returns ruling at that time (OECD, 2000b). Arguing in favour of their 'amber' status is that, in addition to compensation for natural disasters, US emergency payments also included 'market loss assistance payments' which were granted because market prices were perceived as being 'too low'. If farmers are encouraged to expect similar government responses in future periods of low prices, then the payments become built into farmers' expectations and contribute to higher plantings and planned production than without the payments (OECD, 2000b). At the time of writing, the answer to this question remains undetermined (Glauber, private communication, 18 Jan 2001)[20].

Table 2. Direct government payments (US$ million) to US farmers

	1996	1997	1998	1999	2000
Commodity Programs	(732.0)	(575.0)	(4.8)	NA	NA
FAIR Act (AMTP)	5,973.0	6,120.0	6,001.4	5,046.1	4,850.6
Loan Deficiency	NA	NA	1,792.4	5,894.5	7,561.0
CRP and Other	2,098.7	1,950.3	1,578.9	1,849.4	2,003.4
'Emergency'Assistance	0.0	0.0	2,841.0	7,804.0	8,870.0
TOTAL	7,339.7	7,495.3	12,208.9	20,594.0	23,285.0

Source: Penn, 2001, Table 6.

1.4. Preparations for the next US farm bill

The FAIR Act is due to expire at the end of 2002. A successor US farm bill will need to be in place by then. What, in the light of what has happened since 1996, is the next bill likely to look like? Will it be cast in the same 'liberalist' mould as the FAIR Act, with possible further erosion, or even the complete phasing out, of PFC-type payments and other assistance to farmers? Or will it rather treat the FAIR Act as an 'unsuccessful' experiment with farm policy liberalisation and revert to a pre-1996 type model, in which farm product price support is central?

1.4.1. Mainstreaming emergency payments?

Under a provision of the FAIR Act, a 'Commission on 21st Century Production Agriculture' was set up to make legislative recommendations to the President and Congress concerning the future of US agriculture. The composition of the Commission was bi-partisan and its 11

[20] The Economic Research Service of the USDA has conducted a number of empirical studies to quantify distortions arising from domestic support programs by estimating their effects on crop acreages, prices and exports. So, for example, a study of the impact of the marketing loan program for soybeans concluded that, despite a relatively low level of price support, the provision of marketing loans nevertheless raised the acreage planted above the equilibrium level set by market forces alone, giving rise, in turn, to somewhat lower market prices and larger exports (Wescott and Price, 1999). Another study examined the production and price impacts of US crop insurance subsidies. This study covered the insurance of eight major crops and concluded that the subsidies encouraged participating farmers to expand production which, in turn, resulted in lower prices (Young, C.E. et al., 2000). By inference from these results, it may be argued that even PFC payments, which are nominally decoupled from production and prices, in fact give farmers a sufficient incentive to retain land in agriculture rather than transferring it to a non-agricultural use (*Agricultural Outlook*, October 2000, p.15).

members consisted mainly of representatives of farm organisations and agri-business, but chaired by a professor of agricultural economics.
The Commission's recently published report (Commission on 21st Century Production Agriculture, 2001) recommends that, in the new farm bill to replace the FAIR Act after 2002, PFC-type income support payments and price safety net instruments should both be retained. But, these instruments should be supplemented by a new, counter-cyclical income support instrument, termed Supplemental Income Support (SIS). Under SIS, eligible producers would qualify for supplemental payments whenever aggregate gross income from program crops[21] falls below a predetermined proportion of the level reached during a fixed reference period. Like existing PFC payments under the AMTP, the proposed counter-cyclical income payments would be based upon historically determined fixed acreages and yields. In designing and recommending this scheme, the Commission hopes that the proposed new payments would be exempt from domestic support reduction commitments under the WTO, by being classified as 'green'[22].

The Commission admits to having omitted from its report many essential details of how a SIS payment scheme could be made to work, preferring to leave these to be worked out by Congress. However, in presenting the report to the Senate Agriculture Committee, the Commission Chairman produced an independent assessment of the implications of the SIS counter-cyclical income support proposal for the federal budget. This assessment was made by the Washington DC-based Food and Agricultural Policy Research Institute (FAPRI). On the basis of a number of assumptions concerning the exact parameters of the scheme[23], and using a pre-existing modelling system with a stochastic error term, FAPRI projected the budget cost of the SIS proposal over the period 2003-2009. The results are crucially dependent upon whether the payments are linked to a fixed (1995-99) 5-year average income base, or whether they are rather based upon a historical moving average of incomes. Using the fixed income base, the result puts the budget cost of SIS at $5.4 billion in 2003, but declining thereafter, due to expected increasing yields and rising prices, to only $551 million in 2009. Using the alternative moving average income base, the projected budget costs are lower - only $2.8 billion in 2003, for example, and falling even further towards 2009. The lower costs of the moving average base option reflect the eventual dropping out from the base of 1996 and 1997, which were years of relatively high farm income. Which, if either, of these income base options is finally adopted will, of course, depend on the fate of the SIS scheme.

The Commission does not elaborate on the precise form in which it would like to see the existing PFC payments scheme carried over into the next farm bill. In principle, the payments amount could be held constant at their 2002 level. Or they could continue to decline. Or they might even be increased to a higher level. Even more important, the Commission fails to justify retaining these decoupled payments in addition to the new SIS payment scheme. The ostensible purpose of both these schemes is to support farm incomes, with minimum

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21 i.e. wheat, corn, soybeans, sorghum, rice, upland cotton, oats and barley.

22 The basis for exemption from reduction commitments is defined by clause 7 in Annex 2 of the URAA, which deals with 'Government financial participation in income insurance and income safety net programmes.' Exemption depends upon the satisfaction of four qualifying conditions. For present purposes, the two most important of these are: a) eligibility for payments limited to income losses exceeding 30 percent of average gross income in either the preceding three years or a three- year average within the preceding five years; b) the amount of payments limited to less than 70 percent of the producer's income loss in the year to which they relate.

23 The limiting assumptions include counter-cyclical payments covering 70 percent of the difference between the 'target' and actual gross income from the eight program crops.

distortion of trade, and it is not obvious why both are considered to be necessary, rather than only one of them.

1.4.2. Risk management policy

A further section of the Commission's report deals with Risk Management Policy. Under this heading, it recommends the establishment of a new vehicle to encourage farmers to set aside income from 'fat' years for later use in 'lean' years. Under the proposed savings scheme, called Farm and Ranch Risk Management (FARRM), individual crop or livestock producers would be able to open a special savings account, with no minimum annual contribution or maximum account limit. FARRM savings account holders would be allowed to withdraw any amount of money at any time and, most importantly, be allowed to defer taxes on saved income until the time of withdrawal. The budget cost to the government of this scheme would arise from the cost of permitting tax payments to be deferred. The Commission claims that the support given to farmers by such a scheme could properly be classed as 'decoupled' and would thus not be trade-distorting and qualify for 'green box' treatment by the WTO.

This proposed farmer savings scheme for the US is similar to one already established in Canada, where a Net Income Stabilisation Account (NISA) scheme exists jointly between the Federal government, provincial governments and individual farmers, to help stabilise farm incomes over the long-term. Participating farmers can deposit money annually into a special NISA account, which is supplemented by matching government contributions, up to a pre-determined maximum. In low-income years, account withdrawals to supplement current income are allowed, subject to the observance of rules specified in the scheme. A Stabilisation Trigger is activated whenever the current year's income falls below the average of up to five previous years[24]. An alternative Gross Margin Trigger is activated when net income from all sources falls below a minimum income threshold (related to the maximum size of 'matchable' deposits). In 1999, about 60 percent of all eligible producers were in this scheme.

Although counter-cyclical price support is now frowned upon by trade liberalisers, a government can encourage farmers to manage price risk in other ways. For example, farmers can be encouraged to hedge against price uncertainty in commodity futures markets. In the US, crop insurance has been subsidised by the federal government since the 1930s. However, the primary purpose of this has always been to indemnify participating farmers against the physical risks of abnormally low crop yields, rather than the monetary risks of low prices. However, the 1996 FAIR Act mandated a new scheme of income protection (IP) for US farmers. This offers farmer participants a revenue guarantee, based on the product of the expected crop price at harvest time and the farmer's expected yield. Two time periods are involved. At planting-time, when the income insurance contract is signed, an expected price, termed the 'projected price', is derived by the averaging of harvest-date closing futures prices during the preceding month. At harvest-time, the closing futures prices during the month prior to the expiration of the contract are averaged to determine the price used to determine any insurance liability.

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[24] The term 'income' is used loosely here. More precisely, the Stabilisation Trigger is activated by the movement of 'Gross Margin', defined as difference between gross income from all sources and eligible expenses.

For the purposes of IP, the 'revenue guarantee' is the product of the projected price and the expected yield derived from the insured farmer's historical yield record (called Actual Production History). Indemnification is due to the farmer if actual harvest-time revenue falls short of the revenue guarantee, but only up to pre-determined maximum percentage of the APH yield (usually 75 %). Separate cover is needed for different crops, and scheme participants are required to pay a premium, based on the value of the cover provided by the contract. This is subsidised by the federal government. A small administration fee is also charged. From the WTO point of view, the support provided by the subsidy element of this scheme is classed as 'amber'. For this reason, under present WTO regulations, subsidised insurance cannot be seen as an open-ended instrument of agricultural support, either in the US or elsewhere in the world.

Reverting to the question of what the next US farm bill is going to look like, we think that new measures to encourage farmers to insure against unfavourable changes of income is a likely option. However, in designing policies to meet this objective, the federal government may decide to focus, not solely upon farm income alone, but upon the total income of farm households from all sources. It then follows that the next, or even later, farm bill may reflect the recent re-classification of farms, already referred to in Section 1.1. This would permit a minority of commercial farm businesses to be separately identified from a majority of non-commercial farm based households. So, for example, in devising new policy objectives and support instruments, it might be feasible for commercial farms to be targeted specifically according to their support 'needs'. Under a reformed agricultural policy, non-commercial farm households could be similarly targeted, though it might be questioned whether the costs of protecting the welfare of this section of the rural population should fall on the budget of the USDA. These costs might either be transferred to another department of the federal government and removed from the ambit of the WTO Agreement on Agriculture. However, serious political opposition to the separation of commercial from non-commercial farming might come from farm and commodity organisations, which cannot easily discriminate amongst members according to their scale of business. Also, in lobbying the government for assistance, it may suit commercial farmers politically not to be separately identified from their non-commercial brethren. Under the current system, the distribution of government payments amongst farmers is highly inequitable, with the lion's share going to those with the largest production capacity, i.e. commercial farmers, who may prefer not to be exposed to the scrutiny of taxpayers in this way.

1.4.3. Outlook for the next US farm bill

The report of the 21st Century Production Agriculture Commission is clearly the work of a body biased towards the partisan interests of US farmers. Since most members of the Commission represented either farming itself or business interests closely associated with farming, this is unremarkable. However, due to its bias towards agricultural producers, this report may not play a central role in the drafting of the 2002 farm bill. On the other hand, since the formation of the Commission was mandated by the FAIR Act, the report can hardly be ignored altogether.

Economic outlook

The shape and character of the next US farm bill must be affected by the short and medium term outlook for agriculture, including the prospects for exports. The following remarks on this subject draw heavily upon a recent statement made before the US Senate Committee on Agriculture, by the Chief Economist, USDA (Collins, 2001). Major crop prices for the

2000/01 season are expected to remain low, only slightly above the very depressed level of the previous year. But farmers' total cash production expenses, especially the costs of fuel and other energy-related inputs, are forecast to rise to an all-time high. Thus, assuming no further emergency government payments, net cash farm income is projected to decline by around $5 billion between 2000 and 2001.

Based upon a current USDA projection, the longer term outlook for US agriculture, up to 2010, is for the current weak market situation to improve somewhat. Global economic growth is projected to increase from an annual average of 2.6 percent in the 1990s[25], to around 3.5 percent in the current decade. Thus, it is expected that US agricultural exports will be boosted by rising world demand for agricultural products. The US also hopes to benefit from the further liberalisation of agricultural trade, including a satisfactory outcome of the current round of multilateral negotiations. Over the next ten years to 2010, the total value of US agricultural exports is projected to rise by some 43 percent. As for farm income expectations, until 2002, the planned decline in PFC payments is expected to result in some income decline. But, looking even further ahead the outlook improves, as expanding export demand strengthens commodity prices, leading in turn to higher farm incomes. All of the foregoing projections assume a farm policy *status quo,* without any further emergency payments to US farmers up to 2010.

Farm Bureau proposals

On 28 February, 2001, the President of the American Farm Bureau Federation (AFBF), Bob Stallman, presented a set of proposals for the next farm bill to the House Agriculture Committee[26]. The Farm Bureau declares its strong opposition to any farm policy revision involving a reversion to agricultural supply management by the federal government, such as cropland set aside or government controlled grain storage (apart from an emergency reserve). The Farm Bureau's principal proposals are:

(i) Continue and supplement PFC payments inherited from the 1996 FAIR Act, with base acreages and yields remaining unchanged[27]. The proposal fails to specify a level of payments after 2002. Possibly constant continuation at the 2002 level is intended. PFC payment coverage to be expanded to include soybeans (not covered by the AMTP, but only by loan rate support, in 1996).

(ii) Loan rates to be 're-balanced' to achieve 'historical alignment' of the soybean rate with the rates for other commodities. At $2300 million per year, the estimated budget cost of this proposal appears rather high!

(iii) Implement a new counter-cyclical farm income safety net. Payments to be based on average cash receipts for *each* of eight program crops. Payments to be triggered whenever current cash receipts, adjusted to reflect a 'trigger level', are lower than base period cash receipts (after adjustment to reflect frozen yields). The Farm Bureau proposes setting the trigger level at 94 % (of total base period cash receipts) but acknowledges that this would be negotiable. Also, the Farm Bureau wants counter-cyclical payment claims to be separately calculated and administered by individual states. It claims that, only in this way can regional variations in prices, yields and

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25 In 1998, world economic growth, excluding the US, fell to only 1.8 %.

26 The Farm Bureau has the largest membership amongst farm organisations in the US and represents all sectors of agriculture.

27 Under the FAIR Act, contract acreages were based on actual plantings during 1991-1995 and contract yields upon historic yields in 1981-1985.

other relevant parameters be appropriately accounted for[28]. The Farm Bureau hopes that its version of counter-cyclical farm income payments would qualify for green box treatment by the WTO, but recognises that some modification might be needed to realize that objective.

The Farm Bureau estimates that the cost to the federal budget of this set of proposals for the next farm bill would be some $7,770 million per annum higher than maintaining the *status quo* (without reverting to further emergency payments to agriculture). More than half this extra spending would take the form of 'amber' payments.

Economists' arguments

Professor Bruce Gardner, currently President of the American Agricultural Economics Association, has recently testified to the US House Committee on Agriculture during its 2001 Farm Commodity Program Hearings. He acknowledges that, by historical standards, the prices of major field crops are currently low, and net returns from farming operations are low on most farms. Nevertheless, when farm household income from non-farm sources is taken into account, farm households in the US are, on average, still better off than non-farm households. In other words, the average income disparity between farm and non-farm households, which characterised the US economy for most of the 20th century, no longer exists. Moreover, Gardner cites evidence that although a majority of small farms, relying mainly on off-farm income for their survival, may be making farming losses at current prices, a minority of commercial farms (with a farm turnover of $250,000 or more) averaged $117,000 in net farm income in 1998. He also cites evidence that, in the late 1990s, US farm land prices continued to rise despite falling prices and farm incomes[29].

Based on the results of counterfactual analysis, Gardner maintains that, despite widespread farmer criticism of the FAIR Act, the continuation of agricultural policies which it displaced, such as target prices backed by deficiency payments and acreage reduction programmes, would have been much more costly to consumers and taxpayers than the new programme has been. *Ceteris paribus*, policies which encourage farmers to expand output beyond the market clearing level dictated by prevailing free market conditions, must inevitably drive down market prices and farm incomes. In affluent countries like the US, the demand for bulk agricultural commodities like wheat is extremely inelastic. For this reason, farm income support policies that are based upon price support are inherently self-defeating[30]. The argument against using acreage retirement to boost prices and incomes is that to the extent

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[28] Note the similarity between this proposal and the comparable one put forward by the 21st Century Production Agriculture Commission. However, the Commission proposes that payments should be based on a) aggregate cash receipts from all program crops; b) national average receipts; c) a 70 % trigger level. Thus the Farm Bureau proposal is the more ambitious in each of these respects.

[29] A basic principle of land economics, with theoretical backing, is that, at least in the long run, land prices reflect the profitability of farming. As expected profits rise, rents and land prices do likewise, and vice versa.

[30] A situation may arise in which, due to inelastic demand, the increased production induced by price support drives down market prices to such an extent that, despite having produced more, farmers are no better off than had they foregone the support subsidy, produced less and realised a higher market price. But taxpayers are undeniably worse off from the granting of the subsidy. A pure welfare transfer occurs where donor losses are exactly matched by the recipient gains. But this is unlikely to happen if the transfer affects recipient entrepreneurial behaviour, i.e. it is not decoupled. To the extent that recipient gains fall short of donor losses, a 'deadweight loss' equal to the difference is said to occur. This represents the loss to the economy as a whole, i.e. the national income loss, resulting from the transfer.

that such policy is successful in raising domestic market prices, a wedge is driven between domestic and world market prices for competing exporters on the world market to exploit.

Under the FAIR Act, target prices were abolished, but a remnant of the former deficiency payment programme survived in the form of the marketing loan deficiency payment (LDP) safety net. Since 1997, grain prices have been low enough to trigger substantial LDPs and Gardner argues that these have induced overproduction of the crops concerned at a significant cost to the economy as a whole. He also quotes the results of a study by the Economic Research Service of the USDA indicating that, in 2000, US grain production was probably 2 to 3 percent higher than it would have been without LDPs.

As to the shape of the 2002 Farm Bill, Gardner and other like-minded economists tend to look with disfavour on the retention of any agricultural support policies which are not strictly decoupled from current market prices and production decisions, i.e. those called 'amber' in WTO parlance. Thus mainstream economists probably mostly prefer a 2002 Farm Bill in the same mould as the FAIR Act, but without non-decoupled support elements, like LDPs. Thus the AMTP might be renewed to extend beyond 2002, with further PFC payments, possibly continuing to diminish over time. But economists are unlikely to back a scheme of counter-cyclical farm income payments, of the type recommended by the 21st Century Production Agriculture Commission and other producer representative bodies, unless the payments can be shown to be genuinely decoupled. Economists are also likely to be reasonably united in favouring a clearer policy differentiation than at present between the truly commercial and non-commercial sectors of US agriculture. Government assistance to commercial farmers might be confined to measures designed to foster their enhanced productivity, such as helping to finance agricultural research and education ('green' for the WTO). It seems reasonable to suppose that farmers in this class are generally capable of managing risk for themselves, either by purchasing private insurance or by hedging on commodity futures markets. Government assistance to the non-commercial farm sector might rather take the form of educational measures to encourage people living in the country to diversify away from agriculture for any portion of their income and to improve the quality of life in rural areas through investment in rural development.

Political developments

As is customary, party political manoeuvring appears bound to play a major role in determining the direction taken by the next major item of federal legislation on agriculture. At least since the early 1990s, the numbers of Democrats and Republicans have been quite finely balanced in both houses of Congress and the most recent election, in November 2000, merely confirms that situation[31]. Thus, for the foreseeable future, at every new election, intense competition between the parties for seats, particularly in marginal constituencies, appears inevitable. With agribusiness still accounting for around 15 percent of both GDP and employment, few Congressional candidates can afford to ignore the 'farm vote' entirely, and to some it is vitally important. In the Senate, seats are allocated at two per state, regardless of population. Thus, since agriculture tends to be relatively more important in the more sparsely populated states, senators representing such states are particularly exposed to representations by farm organisations.

[31] In the House, the Republicans currently have a small majority, but in the Senate the parties are exactly evenly divided.

It is also relevant to observe that in the US, as in most developed countries, farming and its ancillary industries are very well organised to lobby the government to further their sectional interests. This is partly due to the relative ease with which the representatives of diverse agricultural interests can form coalitions to present a common front to the government. By comparison, the consumers of food and other agricultural products tend to be poorly organised, both in formulating views on agricultural policy and in lobbying for its reform. This weakness of the consumer lobby can be partially explained by the already small and still diminishing share of expenditure on food and other products of agricultural origin in the typical developed country consumer's total household budget.

But if voters tend to have little influence on agricultural policy as consumers, their influence as taxpayers is considerably stronger. Taxation is a dominant issue in modern electoral mandates, and, for that reason, no government can ignore the budgetary implications of any mooted change in government policy, including agriculture. The FAIR Act of 1996 was passed against a background in which Congress had recently leglislated a very tight fiscal policy, involving a sharp reduction in the federal budget deficit. The 1996 farm bill had to be consistent with this constraint, by sharing a proportion of the budget cut. This time, i.e. during the lead up to the 2002 farm bill, the situation is different. For macroeconomic reasons, the federal budget is currently in surplus. However, a pledge to reduce taxes formed an important element of the electoral mandate of George W. Bush, elected President in December 2000. It is possible that a new WTO Agreement might lower the ceiling on permissible domestic support payments (to come into effect after 2002). But, quite apart from this, it seems very unlikely that the new administration, with a tax-cutting Republican President, is going to countenance a new farm bill giving open-ended Treasury support to agriculture.

Both House and Senate had approved a ten-year budget resolution by the end of March 2001 incorporating President Bush's tax-cutting plans. The resolution passed by both branches of Congress allows for increased agricultural spending above what would be permitted by just a continuation of the current law, although the specific proposals of House and Senate are rather different[32]. Given this favourable budget environment, there is now a possibility that the Agricultural Committees may attempt to rewrite the farm bill this year rather than next. A plausible suggestion is that the Republicans in Congress might seek to launch another farm bill in the same spirit as the last one. If that were so, PFC-type preset, but still further diminishing, annual payments might continue to be the main instrument of farm income support. But, in view of how commodity prices behaved in the wake of the FAIR Act, the retention of some kind of counter-cyclical income safety net instrument might also be expected, but designed to be consistent with both present and possible tighter WTO commitments.

To simplify, this report is largely confined to US export crops. However, for the sake of completeness it is apposite to mention that, amongst crops, the US is also a major producer of peanuts, sugar, tobacco and a large array of fruits and vegetables. Amongst livestock and livestock products, the most notable are beef, pigmeat, eggs and poultry and, of course, fresh milk and a wide variety of dairy products. A notable feature of the US livestock sector is that, with the exception of dairy, government measures to support prices and incomes are generally lacking although producers do benefit from tariff protection. The same is true of horticultural products in the crops sector. Imports, in value terms, are dominated by

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32 House of Representatives Agriculture Committee Press Release, 28 March 2001.

horticultural products, animal products, especially red meats, sugar, oilseeds and products, and tropical beverages. Import expenditure is exceeded by export earnings to a substantial degree, so that the US has a considerable agricultural trade surplus.

1.5. Critique of US farm policy developments in light of its WTO commitments

1.5.1. Uruguay Round Agreement Act (URAA) commitments

Under the URAA, the US entered into the same commitments as other developed country contracting parties. On domestic support reduction, the required 20 percent cut in total payments was based on 1986-88, when market prices were relatively low. Thus payments made then, under the old deficiency payment regime, were relatively high, even by post-1994 standards. For that reason, the 1995-2000 reduction requirement has probably been met, with an unused margin to spare (as originally anticipated). But the final outcome may depend on how the recent emergency assistance payments are classified by the WTO. Are they green? Or are they amber? The US government appears to have not yet taken up a formal position on answering this question. WTO members have Domestic Support notification obligations requiring them to notify the Secretariat of their actual amber payment levels compared with their total AMS reduction commitments, on a year-by-year basis. However, a recent background paper by the Secretariat shows that full information on this topic is several years in arrears. Although the deadlines for submitting notifications relating to the years 1995, 1996, 1997 and 1998 have passed, at present, the notification requirements have been fully met only for 1995. In April 2000 notifications by the US were complete up to 1997, but incomplete for 1998. At that time, notifications for 1999 and 2000 were not yet required (WTO: G/AG/NG/S/1). Emergency assistance payments to US agriculture started in 1998 and were repeated in 1999 and 2000. In effect, then, notification of the traffic-signal category in which the US considers these payments fall is overdue, certainly for 1998 and possibly also for 1999. However, in due course, it will be necessary for the US to notify the WTO of all the payments made in these years. In the meantime, the fact that this information is being withheld must surely weaken the negotiating position of the US in the current round.

On market access improvement, the US is duly honouring its commitment to converting NTBs to tariff rate quotas, together with reducing absolute tariff levels (both within and outside the quota) at the rate stipulated by the URAA; that is a cross-commodity average reduction of 36 percent with a minimum 15 percent reduction in every tariff line. The US Country Schedule tabled at Marrakesh, in 1994, revealed the commodities regarding which it intended to cut its tariff only by the required minimum of 15 percent. These included vegetable oils, unshelled peanuts and peanut butter, sugar, cotton, tobacco, beef, and most dairy products. In contrast to these most import sensitive commodities, having undergone minimum tariff reductions, were wheat (except durum) with an above-average tariff cut of 55 percent and corn, with a cut of 75 percent.

On the export subsidy reduction commitment, although the FAIR Act left the requisite machinery for granting export subsidies intact, the US has not, in fact, resorted to using it much since 1994. WTO records are currently available pertaining to the honouring of export subsidy reduction commitments for the period 1995-1999 (WTO: G/AG/NG/S/5). As far as major crops exported by the US are concerned, the records show the US making zero-use returns for the whole of this period. However, regarding exports of 'skimmed milk powder' and 'other milk products', the US is shown as exceeding its export subsidy budgetary outlay and volume commitment limits both in 1997 and 1998. But since, in 1995 and 1996, the US

did not fully utilise its export subsidy allowances for these two classes of dairy products, these over-runs in the following pair of years might possibly be permitted by carry-forward provisions.

Thus, as far as the major export crops are concerned, there appears to be little danger of the US export subsidy ceilings, stipulated by the URAA, in terms of both volume and value, being breached. Several possible reasons suggest themselves to explain this situation. First, because the provisions of the FAIR Act tended to remove the wedge between US domestic and the external world prices of commodities, the economic rationale for subsidising exports to support the domestic market has largely disappeared[33]. Second, the provision of export credit guarantees is an alternative instrument available to governments for assisting exports, particularly to difficult markets. Up to the present, the WTO has lacked authority to discipline this form of export assistance. However, a clause in the URAA committed contracting parties to seeking agreement on how to remedy this omission. Negotiations to this end were initiated in 1994, under the auspices of the Organization for Economic Cooperation and Development (OECD). But, up to April 2001, no agreement had been reached. The US government has resorted to underwriting agricultural export credits attached to exports to Russia, for example.

1.5.2. Dispute settlement

Under the URAA, the machinery for resolving disputes amongst multilateral trading partners was reformed. Since 1994, the US has been a party, either as a complainant or a respondent, to a total of 19 disputes involving agriculture (Table 3). The US was the complainant in 10 cases and the respondent in nine of them. Although most of the cases have been in dispute for several years, only three of them (nos.1, 3 and 4 in the table) appear to have been settled. A settlement to the long-running bananas dispute (no. 11) was announced by the US and the EU Commission on 11 April 2001 (see the EU Directorate-General for Trade website for details).

The procedure is for a dispute to be heard first by a Panel Body set up by the DSB to hear the case. The Panel Body hears the case and delivers its report in due course. Then, if the either of the parties is dissatisfied, the case goes to an Appellate Body for a further hearing and a final judgement and report. Then, if the dispute is settled in the complainant's favour, further time is allowed for the respondent to comply with the judgement. It is not surprising, then, that the settlement of cases frequently gets drawn out for several years. Moreover, the process can be further delayed, at almost any stage, by further claims and counter-claims. Occasionally the procedure is curtailed because the complainant withdraws its request for a panel, following an acceptable response by the respondent. For example, a dispute between the US and the EU concerning grain import duties (no.1 in Table 3) was resolved in this way. The resolution of trade disputes through the WTO can clearly be very slow and costly in other ways, with no certain outcome for either side. Nevertheless, despite these costs considerable use is being made by member states of the reformed WTO disputes resolution

[33] It can be shown that where policy drives a wedge between domestic and world prices, as under a deficiency payments regime, subsidising exports can be an effective means of containing the budget costs of domestic support. Thus, it might be argued that, by abolishing DP support, the FAIR Act also demolished the economic rationale for the US government to subsidise farm exports. It can also be shown that export subsidies are unlikely to be an effective weapon in fighting trade wars with competing exporters: in the end all parties tend to be worse off (Leathers, 2001).

machinery. But disputes involving agriculture form only a small fraction of all those mediated.

Table 3. WTO disputes on agriculture involving the US

	Complainant	Respondent	Product/Issue	Date Started[1]
1.	US	EU	Grain import duties	19/7/95
2.	US & Canada	EU	Meat (Hormones)	25/4/96
3.	Mexico	US	Tomato imports	1/7/96
4.	US	Philippines	Pork and poultry imports	1/4/97
5.	US	Japan	Agricultural products	7/4/97
6.	EU	US	Poultry product imports	18/8/97
7.	US	Canada	Milk and dairy products	8/10/97
8.	US	EU	Cheese exports	8/10/97
9.	Argentina	US	Groundnut exports	19/12/97
10.	US	Mexico	HFCS exports	8/5/98
11.	US & others	EU	Bananas	18/8/98
12.	US	Korea	Beef imports	1/2/99
13.	EU	US	Wheat gluten imports	17/3/99
14.	Canada	US	Live cattle exports	19/3/99
15.	NZ	US	Lamb imports	16/7/99
16.	Australia	US	Lamb imports	23/7/99
17.	Canada	US	Sugar syrup exports	6/9/99
18.	Canada	US	Cattle, swine and grain exp'ts	25/9/99
19.	US	EU	Corn gluten feed exports	25/1/01

Source: WTO, *Overview of the State-of-Play of WTO Disputes,* Geneva, 21 February 2001.

[1] 'Date Started' signifies date when the complainant first formally lodged its complaint with the WTO, as far as could be ascertained from the reference source. But, in any particular case, the dispute could have started earlier than at the date indicated.

1.6. Conclusion

At present, the main focus of interest in agricultural policy in the US appears to be, not the WTO negotiations, but the 2002 farm bill. It's as if they were saying, 'Let's get our domestic problems sorted out before we give serious attention to what we want to get from, and the concessions we are prepared to make in, the WTO'. Agreement on a new farm bill must be hammered out before the existing one expires in 2002: otherwise, the permanent Agriculture Act of 1949, with parity-based farm price guarantees, is automatically re-activated. The current US position on domestic support in the agricultural negotiations appears to be consistent with this hypothesis. In contrast to the 'zero option' they adopted at the start of the Uruguay Round, what the Americans appear to be seeking now is reasonable *uniformity* amongst member countries in levels of domestic support. Put a little more crudely, they would like to see domestic support in all their developed competitor countries reduced to the level they choose for themselves. A full discussion of the US position in the Millenium Round is deferred until Chapter 4 where it is considered along with the EU proposals and China's possible responses to both.

CHAPTER 2.
THE IMPLICATIONS OF WTO MEMBERSHIP FOR CHINA'S FOOD ECONOMY

This chapter examines the implications of WTO membership for China's food economy. Section 2.1 provides brief background information on developments in Chinese agriculture, food policies and trade. Section 2.2 describes the likely shape of the agricultural concessions which China will make on joining the WTO. Although the negotiations are not yet concluded and the final schedule of commitments is not yet completed, enough is known of the bilateral deals struck with the United States and the EU to allow a reasonably accurate assessment of the agricultural package to be made[34]. Section 2.3 examines recent projections of the likely evolution of the Chinese food production and agricultural situation over the next ten years and, against that background, examines the possible impact of China's membership of the WTO on these projections.

2.1. Agricultural policy in China

2.1.1. Role of agriculture in the Chinese economy

Table 4 and Table 5 present some basic statistics on the changing structure of the Chinese economy and of the agricultural sector. There has been extraordinary growth in GDP in the post-reform period after 1979. Agriculture contributed 40 % of Chinese GDP in 1970, but its share fell to only 18 % in 1999. However, its employment share, which amounted to 81 % in 1970, remains very high at 50 % in 1999. China is still overwhelmingly rural, with 69 % of its population living in rural areas even in 1999.

Within agriculture, cropping is the dominant sub-sector, contributing 82 % of the gross value of agricultural output in 1970. This declined significantly over time and was less than 60 % after the early 1990s. During the same period, the share of livestock output value more than doubled from 14 % to about 30 %. The contribution of fish products to agricultural output value rose at an even more rapid rate during the reform period.

2.1.2. Policy developments

Grain self-sufficiency has been central to Chinese agricultural policy and agricultural policy reform has closely reflected developments on its grain market[35]. The major function of grain policy in pre-reform China was to reduce the cost of the industrialisation programme by keeping wages for workers low. Production was organised in the People's Commune structure through production brigades and production teams. The state monopolised grain procurement and marketing. Procurement prices were kept substantially lower than what would prevail under free market conditions. Through a system of ration cards, urban consumers were able to purchase specified amounts of grain at low official prices.
The first major reform was the decentralisation of agricultural production from the commune system to individual farm households which began in 1979 and gradually spread to the whole

[34] It is also important to bear in mind that China's accession opens the way for Taiwan's WTO accession which will also have impacts on agricultural trade, although these implications are not considered in detail in this report.

[35] Useful discussions of China's post-reform agricultural policy can be found in the following sources: Feng, 1999; Garnaut, Guo and Ma, 1996; Huang J. 2000; Huang Y. 1998; OECD, 1997; and Yang and Tian, 2000.

country. Under the Household Responsibility System, farm households were permitted to sign long-term land contracts to cultivate specific crops. Procurement prices and above-quota premiums were increased. Procurement quotas were gradually reduced, and even abolished, for some commodities.

Table 4. Changes in structure (%) of China's economy, 1970-99

	1970	1980	1985	1990	1995	1999
Share in GDP						
Agriculture	40	30	28	27	20	18
Industry	46	49	43	42	49	49
Services	13	21	29	31	31	33
Share in employment						
Agriculture	81	69	62	60	52	50
Industry	10	18	21	21	23	23
Services	9	13	17	19	25	27
Share in agricultural output						
Crop	82	76	69	65	58	58
Forestry	2	4	5	4	3	4
Livestock	14	18	22	26	30	29
Fishery	2	2	3	5	810	
Share of rural population	83	81	76	72	71	69

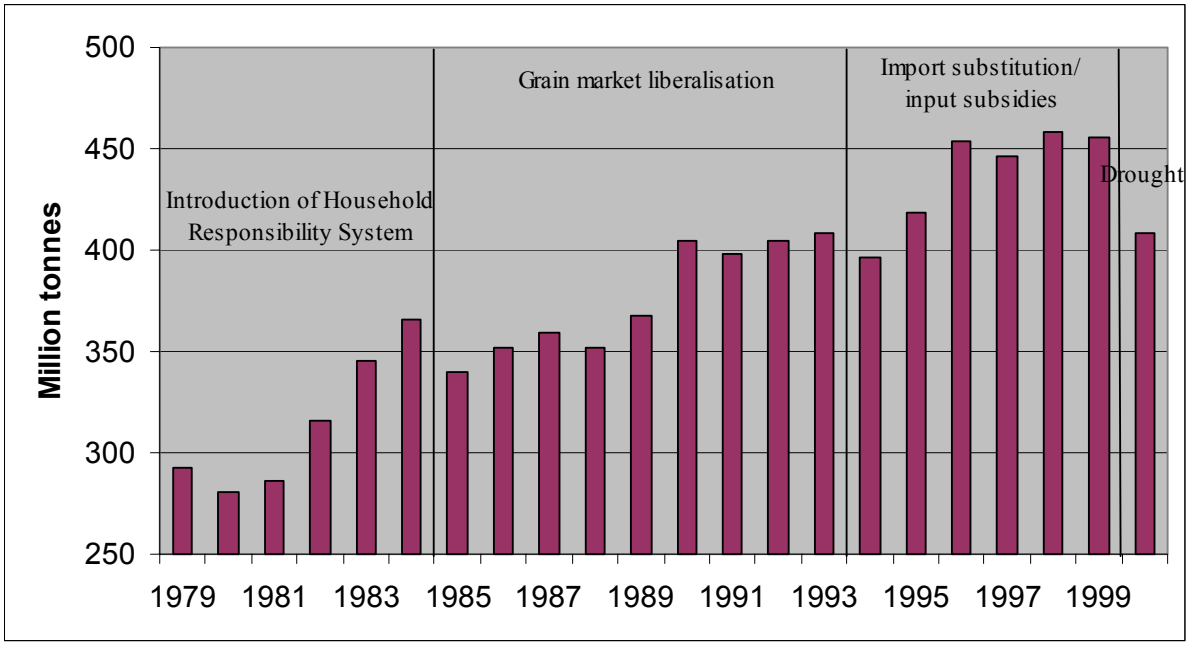
Source: Huang, 2000 based on State Statistical Bureau, China Statistical Yearbook, various issues; and China Rural Statistical Yearbook, various issues.

Table 5. Annual growth rates (%) of China's economy, 1970-99

	1970-78	1979-84	1985-95	1996-99
Gross domestic product	4.9	8.5	9.7	8.0
Agriculture	2.7	7.1	4.0	3.6
Industry	6.8	8.2	12.8	9.4
Service	na	11.6	9.7	8.0
Grain production	2.8	4.7	1.7	1.9
Oilcrops	2.1	14.9	4.4	3.4
Fruits	6.6	7.2	12.7	9.4
Red meats	4.4	9.1	8.8	9.2
Fishery	5.0	7.9	13.7	10.4
Population	1.80	1.40	1.37	0.97
Per capita GDP	3.1	7.1	8.3	7.0

Note: Figure for GDP in 1970-78 is the growth rate of national income in real terms. Growth rates are computed using the regression method. Growth rates of individual and groups of commodities are based on production data; sectoral growth rates refer to value added in real terms.
Source: Huang, 2000, based on SSB, Statistical Yearbook of China, various issues; MOA, Agricultural Yearbook of China, various issues.

Figure 1. Grain production in China, 1979-2000



The success of the reform package led in 1984 to China's first grain surplus since 1949 (Feng, 1999). Farmers faced difficulties in selling their grain because of the reluctance of the state grain bureaux to purchase grain due to a shortage of storage capacity. The costs to the state budget ballooned both because of increased storage costs and the increased price differentials between higher procurement prices and low retail prices. The cost of the grain subsidy alone amounted to over 10 per cent of the government budget in 1984 (Feng, 1999). As a result, there was a willingness to explore further grain price and marketing reforms.

Policy reform next focused on liberalising the mandatory procurement system, except for grain, oilseeds and cotton. In 1985, rural market reforms were introduced to abolish the unified purchasing and marketing system. State purchases of grain, cotton and oilseeds were maintained, but quantities and prices were negotiated between the government and farmers. As market prices rose (helped by significant net exports in 1985 and 1986 in contrast to average annual net imports of more than 10 million tonnes in the previous six years), the state found it difficult to procure its grain requirements within its budget constraint (recall that urban grain sales continued at subsidised prices) and resorted to obligatory purchase of the contract amounts. Market deregulation for other products was, however, much more successful. This contributed to a relative stagnation in grain production which did not reach its 1984 level again until 1989. Supply growth slowed because of the increasing competition for resources from other booming sectors such as cash crops and rural industries, while demand rose rapidly as income growth in the economy started to accelerate.

By the end of the 1980s market prices had recovered sufficiently to encourage a recovery in grain output. This was also helped by a period of macro-economic austerity which led to the retrenchment of rural enterprises and the return of rural migrants to their villages (Feng, 1999). The emergence of a second grain surplus around 1990 led to a further period of reform, motivated again by the high budget costs to the state in terms of subsidies for urban consumers and the operational losses of the grain bureaux.

The main element in the 1992/93 grain price reform was to liberalise grain prices and marketing operations. This is known to Chinese farmers as the 'third revolution', after land reform in the 1950s and the Household Responsibility System in 1979 (Garnaut et al.). Procurement and distribution prices were unified and consumer subsidies to urban households were phased out. Domestic prices for grain started to reflect movements in demand and supply in domestic markets. A state procurement quota was maintained, but after delivering their quota, farmers were allowed to sell their surplus in rural free markets.

Unfortunately, there was a small downturn in grain production in 1994 (Figure 1) and market prices for grain rose dramatically. Price inflation for grain reached an all-time high of about 50 per cent in 1994. China switched from being a large exporter to a large importer of grains in 1994 and 1995. This switch led researchers to believe that China was entering a new grain trade era. Warnings from outsiders that China might not be able to feed itself in the future led to a new Chinese policy biased towards grain production. Grain policy was reformulated with an emphasis on grain self-sufficiency[36]. This led to a historical change in China's agricultural development. Domestic market prices were pushed from below international prices to levels similar to those on world markets, and even above.

The new grain policy introduced in late 1994 gave provincial governors the responsibility to maintain the 'grain bag'. Governors were to stabilise the area sown to grain crops, guarantee investment in agricultural inputs to stimulate grain production, and stabilise grain prices. Additional production was stimulated by subsidised inputs (notably fertiliser, pesticides and water) and by administrative pressures. The original regime of grain procurement and marketing was restored. In 1996, quota prices for grains were increased sharply as the government tried to stimulate grain production to assure adequate grain supplies. The policy bias towards grain shifted resources from other crops and led to four bumper crops in a row between 1996 and 1999 (Figure 1). This put downward pressure on market prices and in 1997, the protected price system was introduced with the aim of ensuring farmers would receive a minimally acceptable price covering their costs of production. At the same time, the area devoted to cotton, sugar beet and soybeans decreased sharply.

In 1998, the grain marketing reform known as the "Four Separations and One Perfection" reversed the move towards freeing up grain marketing and strengthened state control over the national grain system. Farmers were required to sell their grain to grain bureaux. Grain trading by private companies was officially forbidden though this restriction was not thoroughly enforced. In response to the inefficiencies of the grain bureaux and the growing financial cost of the grain policy, the authorities separated (1) the bureaux' policy functions from commercial functions, (2) government-owned reserve stocks from commercial functions, (3) the responsibilities of central government from those of local government, (4) old from new bank debts. The 'perfection' is a process to integrate government procurement prices with market prices.

In May 1999, the authorities announced some modifications to the centralised procurement policy. Unlimited purchase at protected prices of poor quality varieties with limited market demand was abandoned and price differentials for products of different quality were widened.

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[36] Brown forecast that China's total grain deficit would rise to 370 million tonnes in 2030, nearly double total world exports at that time, if it did not stick to its self-sufficiency strategy (Brown, 1995). Other research organisations including the US Department of Agriculture, the International Food Policy Research Institute and the Food and Agricultural Policy Research Institute, projected more modestly that Chinese grain imports would reach 22 to 25 million tonnes by 2005 and 40 to 45 million tonnes by 2020.

Fixed grain subsidies were provided by the central government for each province, and grain processing and feed enterprises were allowed to procure grain for their own use. Nonetheless, the monopoly control over grain procurement by central government has been maintained. Reforms of the marketing systems of cotton, tobacco, silkworm cocoon, wool and other industrial materials were also advanced in 1999.

China suffered a severe drought in 2000 which led to a marked decline in its annual grain crop, which was down by about 10 per cent compared to the average production of the previous five years. However, because of the massive grain reserves built up in previous years, the shortfall in domestic output did not trigger a major surge in grain imports. Information on the exact size of China's grain reserves is considered a state secret. Despite the drawdown in 2000, very sizeable reserves are still believed to exist.

The stance of agricultural policy can be measured by indicators such as the nominal protection coefficient or the Producer Support Estimate (PSE). One study of PSEs for Chinese agriculture estimated that PSEs as a percentage of product value rose from around minus 50 per cent in the mid-1980s to around zero per cent in the mid-1990s (Garnaut, Cai and Huang 1996). Protection has further increased since then. One must be careful when estimating protection rates in China to clarify which producer price is being used. Procurement quota prices have consistently taxed farmers (except in the most recent years), while the introduction of negotiated procurement significantly reduced this taxation effect.

Table 6. Average 1996-98 protection coefficients

	Nominal protection coefficient	Effective protection coefficient
Rice	0.75	0.76
Wheat	0.92	0.97
Maize	1.18	1.32
Sorghum	1.04	1.10
Soybean	0.95	0.97
Rapeseed	0.86	0.88
Cotton	0.89	0.94
Tobacco	0.81	0.83
Sugarcane	1.18	1.36

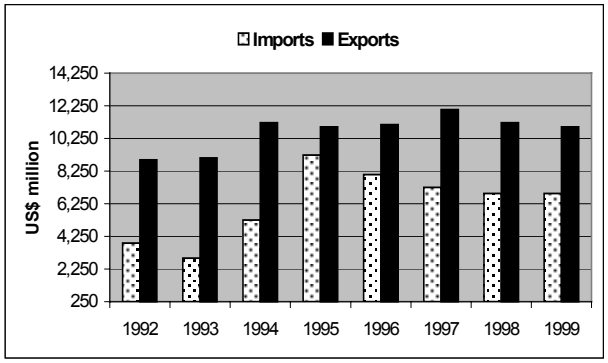
Source: Fang and Beghin, 2000

One attempt to measure price incentives for Chinese farmers is shown in Table 6. The producer prices behind this table are taken from household budget surveys so they are probably a weighted average of the prices actually received for crops sold at different prices. Border prices are based on world market prices adjusted for transport and distribution costs, and also adjusted for real exchange rate overvaluation since 1994. Without this exchange rate adjustment, protection rates would be significantly higher. The nominal protection coefficient only considers product market protection, while the effective protection coefficient also takes into account taxes and subsidies paid through inputs. Rice appears as the most heavily taxed commodity, while maize, sorghum and sugar cane appear to be protected. More recent figures confirm the protection provided to grain crops. In 1999, the USDA reports that both the fixed quota and the support price in Shandung Province were set at US$154, about 30 percent higher than the U.S. hard red winter wheat f.o.b. prices, which ranged from US$110 to US$120 per ton. China's fixed quota and market prices for maize in

1998 remained just under US$150 per ton, well above the U.S. No. 3 f.o.b. Gulf price of just over US$100 per ton. Market prices in China in the first 6 months of 1999 fell steadily, reaching US$124 per ton in July at a time when the U.S. maize export price had fallen below $80 per ton (USDA, *Agricultural Outlook*, March 2000).

2.1.3. China's agricultural trade

Figure 2. China's food imports and exports, 1992-99



Source: OECD International Trade Statistics database

Recent trends in China's agricultural trade are shown in Figure 2. China is now a significant food exporter, with exports of $11.0 billion in 1999 compared to imports of $6.9 billion.[37] China accounts for one-sixth of the world's food market despite its still relatively low per capita income. Exports peaked in 1997 and have fallen slightly since then due to the adverse effects of the Asian crisis. Imports peaked in 1995 and the fall since then has been in response to the incentives for greater grain self-sufficiency in the past few years.

The main sources of China's food imports and exports are shown in Figures 3 and 4. North America (United States) and Asia (Malaysia, Indonesia and Japan) are the main sources of China's food imports. Latin America's share has been growing over time at the expense of other regions. The EU's share has fallen slightly, from 10 per cent in 1992-94 to just 8 per cent in 1997-99. On the export side, China's main markets are highly concentrated in Asia with relatively small proportions of its total food exports going to the EU and North America. Japan and Hong Kong are by far its most important markets. This pattern reflects the advantages of geographical proximity, but it may also be an indication that the quality and marketing presentation of China's food products are more acceptable in Asian markets than in the highly competitive markets of the industrialised countries. If so, greater foreign investment in China's food processing sector, which will be encouraged by China's WTO accession, should help China to gain improved access to these markets. Another possibility is that there are nontariff barriers, particularly food health and safety standards, to entering industrialised country markets. If so, this may be another area where China may hope to get benefits for its food exports from WTO membership.

More detail on the structure of exports and imports is shown in Table 7. In eight out of the eleven product categories China was a net exporter in 1999. Particularly impressive is the growth in exports of the fruit and vegetables and fish categories, both of which now account for $3 billion of exports annually. Other important export categories are the more traditional exports of cereals and meat (mainly pigmeat). However, China's livestock product trade has developed very slowly over the last 20 years. Currently, China exports only about 5 percent

[37] Estimates of China's agricultural trade differ depending on what is included as agricultural and also depending on which data source is used. See the appendix in Carter and Li for a discussion. There is considerable evidence that significant imports from Hong Kong go unrecorded, thus biasing downwards official estimates of China's agricultural imports (Chen, 2000).

of its poultry meat output and 1 percent of its pork and beef output. Export markets are very localized, with most shipments going to China's closest neighbours. Exports of the product with which China is most associated, at least in the UK and Ireland, namely tea, are important but stagnant. It is sometimes argued that China's agricultural trade pattern, and the surplus that it maintains, is to a large extent the result of the self-sufficiency policy it has pursued. However, the pattern of China's food exports is more in line with its resource endowments and comparative advantage than this argument would allow. Horticultural and aquatic production is labour-intensive and makes good use of China's scarce land endowment.

On the import side, China's principal imports are oilseeds and vegetable oils. The 'governors' grain responsibility system' does not cover oilseeds or their products which enjoy a relatively liberal policy regime (OECD, 2000a). Over the last few years, this has combined

Figure 3. China's major food suppliers, 1992-99

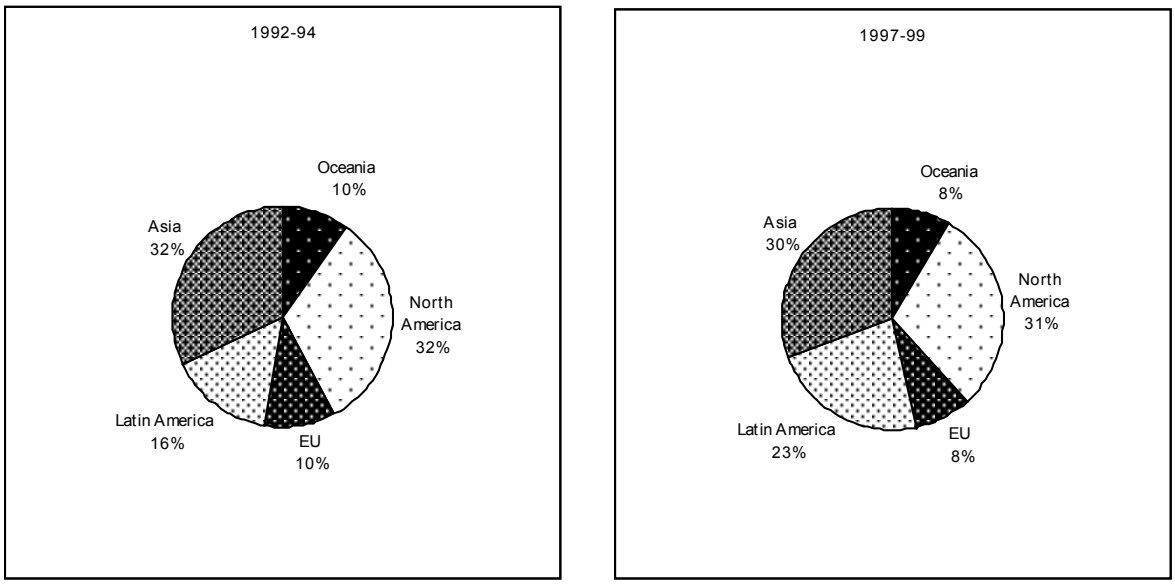
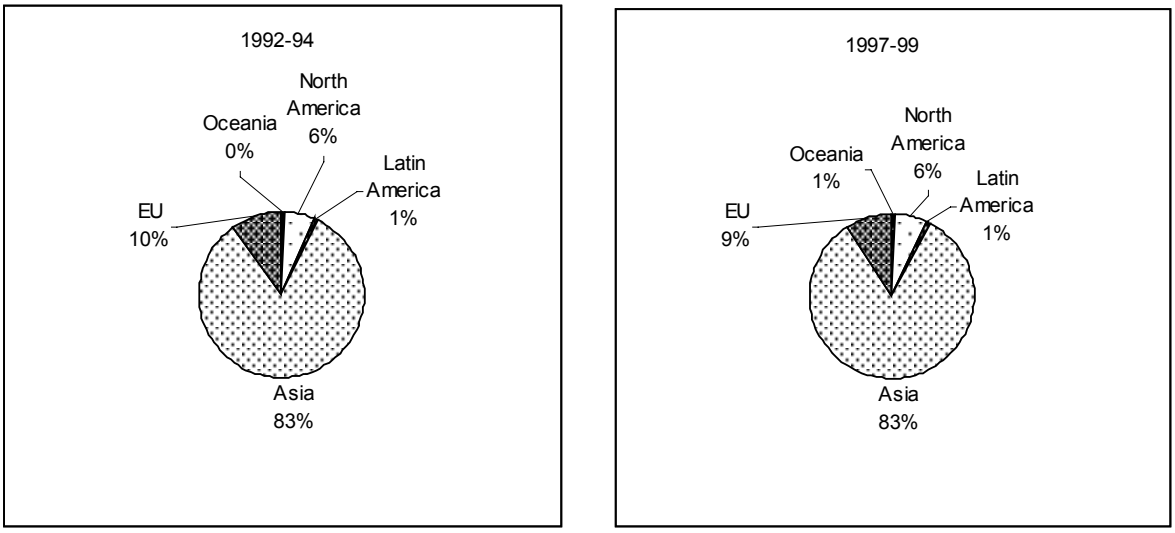


Figure 4. China's major food export markets, 1992-99



Source: OECD International Trade Statistics database

Table 7. Structure of China's agricultural trade, 1980-1999, US$ million

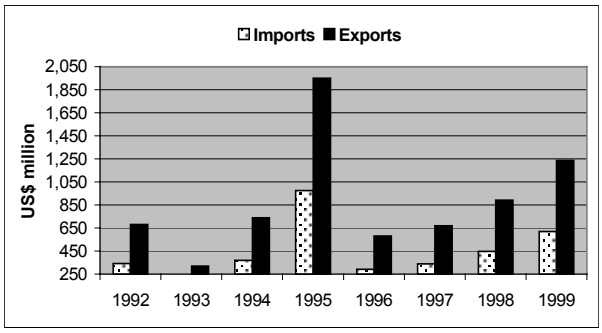
Commodity	SITC	1980		1985		1990		1995		1999	
		Export	Import	Export	Import	Export	Import	Export	Import	Export	Import
Live animals	00	384	5	304	18	430	14	473	18	374	22
Meat etc.	01	361	1	448	6	791	54	1,349	97	1,054	503
Dairy products etc.	02	71	5	57	31	55	81	61	60	71	160
Fish etc.	03	380	13	283	44	1370	102	2,875	609	2,969	890
Cereals etc.	04	423	2458	1065	982	614	2353	281	3,631	1,273	574
Vegetables and fruits	05	746	48	825	52	1759	83	3,399	185	3,150	384
Sugar etc.	06	221	316	79	274	317	390	321	935	214	183
Coffee, tea etc.	07	328	56	435	40	534	30	523	74	561	72
Animal foodstuffs etc.	08	58	14	241	83	623	182	351	423	239	620
Others	09	49	2	66	23	107	46	290	92	541	182
Hides and skins	21	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	51	411	13	408
Oilseeds	22	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	522	110	373	1,531
Vegetable oils	4	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	454	2,596	132	1,352
Total food		3,021	2,918	3,803	1,553	6,600	3,335	10,951	9,239	10,964	6,882

Source: Feng (1999) for the 1980, 1985 and 1990 data; OECD International Trade Statistics database for the 1995 and 1999 data. Feng also provides the 1995 data which are similar to those reported here. He does not give data for trade outside the SITC 0 category.

with freer trade to promote rapidly rising imports of oilseeds, oilmeals, and vegetable oils, especially soybeans, soya products, rapeseed and palm oil. Meat and dairy product imports, which would be of principal interest to the EU, are conspicuously low.

China's food trade with the EU is shown in Figure 5. China runs a surplus on its food trade with the EU; in 1999 it exported just over $1.2 billion worth of agricultural goods to the EU, importing $0.6 billion worth in return. For most of the decade, indeed, the EU's exports to China fluctuated around a mere $0.3 billion and it is only the growth of a trade in oilseeds in 1998 and 1999 which led to the doubling of this figure in 1999. The figures for 1995 when China's exports to the EU reached $1.95 billion appear to be an outlier in that decade. The EU has a smaller share of China's food imports than of China's imports in general, reflecting its comparative disadvantage in exporting agricultural products to China (Figure 6). The EU is also a relatively more important market for China's non-agricultural exports than for its food exports, though in both cases there appears to be a slight tendency for the EU's relative importance as an export market for China to increase (Figure 7).

Figure 5. China's food trade with EU, 1992-99



Source: OECD International Trade Statistics database

Table 8. China's imports of food products from the EU, 1992-99, US$ million

Imports	1992	1993	1994	1995	1996	1997	1998	1999
Live animals	5	2	3	4	5	5	4	6
Meat etc.	10	10	11	8	7	8	11	55
Dairy products etc.	28	18	28	21	19	23	28	40
Fish etc.	7	14	24	41	45	50	56	81
Cereals etc.	200	30	5	523	55	38	57	119
Vegetables and fruits	1	1	2	5	5	6	7	9
Sugar etc.	1	2	3	5	5	7	6	9
Coffee, tea etc.	1	1	2	2	2	3	5	4
Animal foodstuffs etc.	10	10	8	13	12	15	15	23
Others	7	4	4	3	4	4	5	13
Hides and skins	7	4	4	3	4	4	5	13
Oilseeds	0	0	0	1	0	4	110	202
Oils	67	66	278	348	129	172	140	48
Total imports	343	162	371	976	293	339	448	621

Source: OECD International Trade Statistics database

Table 9. China's exports of food products to the EU, 1992-99, US$ million

Exports	1992	1993	1994	1995	1996	1997	1998	1999
Live animals	0	0	0	0	0	0	0	0
Meat etc.	52	66	97	138	173	79	32	33
Dairy products etc.	0	0	0	0	0	0	1	1
Fish etc.	54	55	80	138	128	188	291	254
Cereals etc.	11	23	18	11	17	20	10	9
Vegetables and fruits	394	348	394	389	358	384	472	461
Sugar etc.	23	20	24	48	45	37	46	28
Coffee, tea etc.	46	74	72	64	67	71	107	83
Animal foodstuffs etc.	124	157	52	32	80	38	15	30
Others	11	10	11	14	21	26	34	39
Hides and skins	3	5	2	1	2	10	2	1
Oilseeds	99	107	190	111	129	55	81	93
Oils	31	55	16	14	27	26	18	14
Total exports	848	919	957	960	1,047	933	1,109	1,046

Source: OECD International Trade Statistics database

Figure 6. EU's share of China's imports, 1992-99

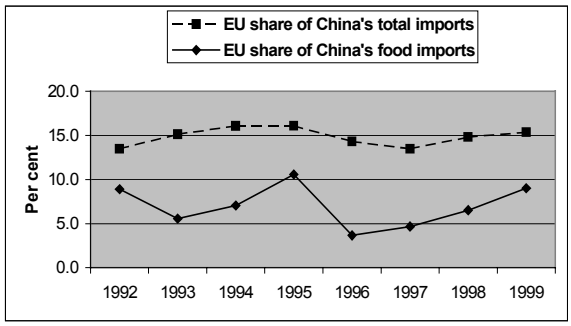
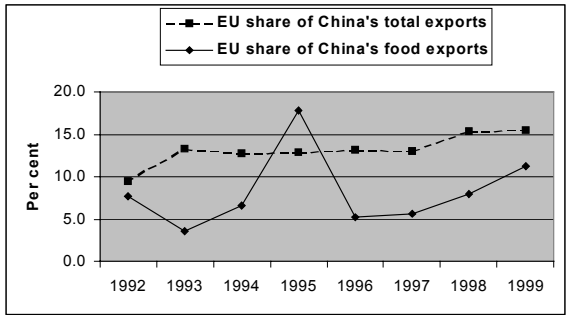


Figure 7. EU's share of China's exports, 1992-99



Source: OECD International Trade Statistics database

The structure of China's food trade with the EU is shown in Tables 8 and 9. China's imports of food and agricultural products in most commodity categories are small in absolute value, with only cereals and oilseeds exceeding $100 million in 1999. In particular, EU exports of meat and dairy products to China appear very low. China's exports to the EU reflect its strong export position in fruits, vegetables and fish, with perhaps the only surprise being the relatively low value of exports in the tropical beverages category which includes tea.

2.1.4. Future agricultural policy objectives

China is a rapidly growing economy, and is reaching the stage of development where, historically, governments make the shift from taxing to subsidising agricultural production. This pattern is particularly clear in the policy shifts which have occurred in China's East Asian neighbours. There are strong domestic pressures that China should follow the East Asian model and raise its trade barriers further in an attempt to maintain food, and particularly grain, self-sufficiency. The downturn in grain production and the jump in grain prices in the mid-1990s were a severe shock to the Chinese authorities and reinforced their commitment to maintain a high degree of self-sufficiency in grain. Indeed, recent policies even emphasise grain self-sufficiency at the provincial level. But grain is a land-intensive crop with low returns to labour, so many households would rather work in other activities that bring them higher returns. Hence, China's leaders have implemented a variety of measures to ensure grain production, from requiring farm households to deliver a certain amount of grain in exchange for access to land, to maintaining an artificially high price for grain. Maintaining a high grain price, a relatively recent policy, is also intended to fulfil another important policy goal—to raise rural incomes.

Now China has chosen this moment to apply for WTO membership and, as we will see in the next section, to bind its tariff protection at relatively low levels. The consequences of this decision are intensely debated in China. What will be the impact on China's future food security? What will be the impact on relative farm and nonfarm incomes? What will be the impact on the regional distribution of income? These are all sensitive questions in China, and the Chinese authorities will be anxious to ensure that they are in a position to manage the transition to a more liberal trade regime.

A number of commentators have pointed out that China can still do a lot to promote grain production quite apart from price incentives (see, for example, Ding, Hu and Liu, 1998; Huang Y., 1998). First, reduced government intervention in grain production and marketing would help to reduce policy uncertainty for China's grain producers. The provincial

governors' grain bag responsibility system hampers regional specialisation and the optimal allocation of China's land resources. Further market-oriented reforms would allow the comparative advantages of different regions to be better exploited and to concentrate efforts in the best grain production regions.

Second, increased investment in agricultural infrastructure and scientific research is necessary to ensure continued growth in yields. Huang et al. (1999) discuss technology development policies. After the 1960s, China's research institutions grew rapidly, from almost none in the 1950s, and produced a steady stream of new cereal varieties and other technologies. However, in the second half of the 1980s real investment in the research system and in irrigation infrastructure stagnated. By the mid-1990s, the intensities of both agricultural research and extension expenditure were one of the lowest in the world. More recently, the Chinese government concludes in its Long Term Plan For 2010 that China must accelerate the development of new technology, particularly new crop and livestock varieties, to raise future agricultural production. The government has begun an ambitious programme promoting biotechnology and has pushed a number of high profile technology projects, such as hybrid rice. It has also set ambitious funding targets. There is still doubt as to whether the government is on target with these plans or not, but their success or otherwise will play an important role in determining China's future food production potential (Huang et al., 1999).

The third area where reform could play an important role is with respect to land tenure. Current government policies on land tenure can be summarised as follows (Ding, 1999): farmers' right to use their farmland has been extended to 30 years; family land holdings are not subject to change when family size changes; transfers of land use rights are permitted under certain circumstances; and scale economies are encouraged where it is appropriate to exploit them. However, these policies have yet to be fully implemented and uncertainty over land tenure may be a factor inhibiting farmers from making additional investments in food production.

2.2. China's WTO accession offer in agriculture

On accession, China will take on the general commitments inherent in WTO membership. These include most favoured nation treatment under Article I, national treatment of foreign suppliers and the use of price-based measures, such as tariffs, rather than quotas to restrict imports. It will also adhere to the Agreement on Agriculture, and will take on commitments under a wide range of additional agreements. Among the most important will be the provisions on state trading under Article XVII of GATT, the Sanitary and Phyto-Sanitary (SPS) Agreement and the Technical Barriers to Trade (TBT) Agreement. The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) may also be important, given the increasing use of IP-intensive inputs in agriculture. This report focuses solely on the implications of Chinese accession to the Agreement on Agriculture.

2.2.1. Current agricultural trade policy in China

China restricts market access for agricultural products in various ways. High tariffs, quantitative barriers, sanitary and phyto-sanitary measures and regulation of market access are the major obstacles. China limits the types and numbers of enterprises that have the legal right to engage in international trade. Only firms granted trading rights may import products into China and have access to China's distribution system. In addition, some products such

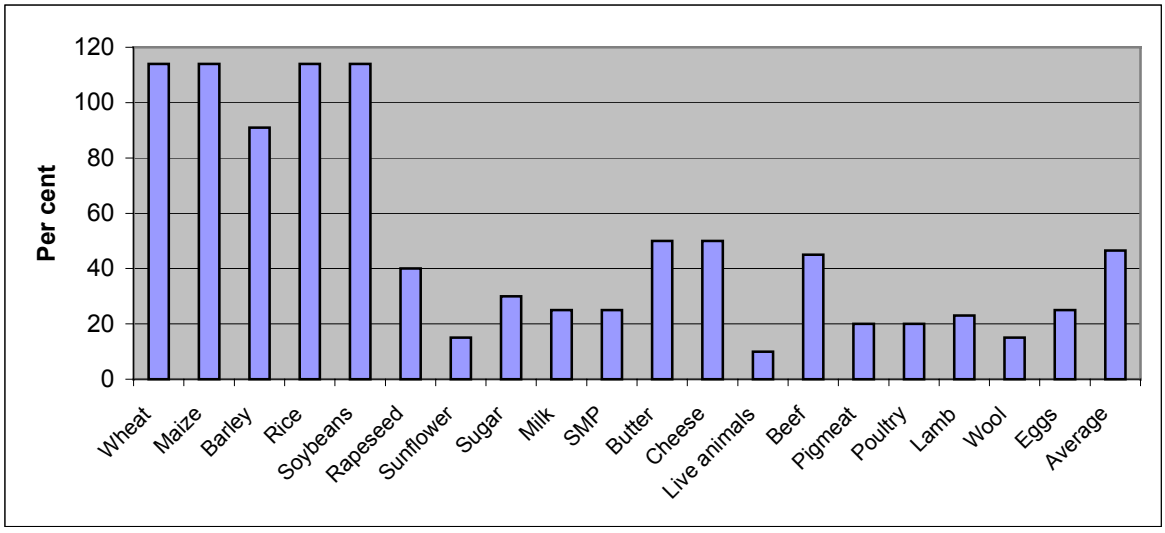
as grains, cotton and vegetable oils can be imported only or principally through state-trading enterprises.

China's trade policy is characterised by a strongly dualistic trading regime (Naughton,1999). Under the 'export processing' (EP) regime, exporters are permitted to bring imported inputs into the country duty-free and with a minimum of administrative interference and regulation. Although not legally necessary, most firms benefiting from this regime are foreign-invested enterprises (FIE). The alternative to the EP regime is the ordinary trade (OT) regime. Ordinary trade is conducted primarily by trading companies, which until 1999 were all state-owned. Virtually all agricultural trade is conducted through the OT regime, and most of it is channelled through large state-owned foreign trade corporations. In particular, state trading enterprises (STEs) have exclusive rights to import most grains, vegetable oils, tobacco, sugar, fertiliser, cotton and petroleum. The most important of these is COFCO (China Cereals, Oils and Foodstuff Import and Export Company). All quotas and licences on imports of cereals are determined by the State Council and executed through COFCO. Exports are regulated by a system of export licences, also granted by the State Council and executed by COFCO.

The pre-reform Chinese trade regime was dominated by between 10 and 16 State Foreign Trade Corporations (SFTCs) with effective monopolies in the import and export of their specified range of products. During that time, Chinese enterprises could only import by purchasing imports from the SFTCs and could only export by selling to the SFTCs. Since 1984, state owned production enterprises and foreign-invested enterprises have been able to apply for a foreign trade operating right (FTOR) which enables them to import what they need for their own production without having to buy through the SFTCs. Similarly, state-owned firms who receive export trading rights are generally limited to exporting their own products. However, it is only since 1 January 1999 that private Chinese businesses can apply for a right to trade, again limited to the importation of products that are needed for the production of the enterprise. In general, the FTOR right is conditional upon achieving a certain level of exports. Thus the right to import is still restricted. No one can sell imported goods to the Chinese market (that is, to arm's length customers) except foreign trading companies, and these are all licensed to certain specific scopes of business (Naughton, 1999). The consequence of this closely-regulated trading system is that reducing trade barriers is unlikely to be effective without liberalising trading rights and reducing the role of STEs in China.

China's average tariff rate for agriculture is around 22 per cent, but many products are protected by much higher rates. Figure 8 shows the applied MFN rates for bulk agricultural commodities levied in 1998. Imports of grains and oilseeds, however, can enter under a tariff-rate quota system at a reduced rate of duty. China introduced tariff rate quotas (TRQs) for wheat, maize and rice in 1996, although no rules covering their administration or actual quota volumes have been revealed publicly (Schmidhuber, 2001). In-quota tariff rates in 1998 varied from 8.7 per cent on average for wheat, 3.1 per cent for rice and 10.8 per cent for maize. In 1996 China also announced it was introducing TRQs for oilseeds but it failed to implement these and relied instead on readily available import licences to regulate trade flows. Soybean imports are subject to a 3 per cent in-quota tariff while soybean meal imports incur a 5 per cent in-quota tariff. Although there is no active quota system for these two products, meal imports need a license (OECD 2000a). Soybean oil, in contrast, is subject to a quota system and a 13 per cent tariff. In addition to COFCO, only five other trading companies are authorised to import oilseeds and products.

Figure 8. China's applied MFN tariffs, 1998



Note: Ad valorem rates taken from the UNCTAD TRAINS database
Source: OECD 2000

Direct export subsidies and VAT rebates for exporters formed the main elements of China's past export promotion policies. Direct subsidies were abolished on 1 January 1991 and in 1997 China assured a WTO working party it would not resurrect them (OECD, 2000a). However, it has been reported that China subsidised its maize exports in 1999 and 2000 as a way of reducing excessive stocks (Schmidhuber, 2001). Cereal exports can also benefit from indirect export subsidies. COFCO can buy low-price 'quota grain' from the domestic procurement system and sell it on world markets at prices below the domestic price. The subsidy element is financed by grain producers who must deliver a percentage of their production quota at lower procurement prices. The VAT rebate system also functions as an indirect export subsidy. While the reimbursement of VAT paid on inputs is a normal commercial practice and does not in itself constitute a subsidy, China is alleged to use varying and discretionary VAT reliefs and exemptions as a way of managing both imports and exports (Schmidhuber 2001).[38]

Export competitiveness was also helped by a depreciating exchange rate between 1978 and 1992. However, the real exchange rate appreciated by about 30 per cent from 1992 to 1997 (Table 10) and acts an an implicit tax on agricultural exports.

2.2.2. The prospective Chinese WTO offer on agriculture

The agricultural market access concessions include tariff reductions, the establishment of tariff rate quotas for bulk commodities, commitments not to use export subsidies and to reduce domestic support, and a phase-out of restrictions on trading rights. The bilateral protocols require China to meet WTO commitments by the end of the URAA phase-in period for developing countries (i.e. in 2004, except for tariff rate quota commitments to be fully implemented by 2005).

[38] Huang (2000), however, argues that the VAT rebate system has acted as an implicit tax on exports. His argument is that in 1995 the authorities reduced the VAT rebate on inputs purchased for export production below what could be justified because the claims for rebates substantially exceeded expectations.

Table 10. China's exchange rates, 1990-99

Year	Yuan/$US
1990	4.783
1991	5.323
1992	5.515
1993	5.762
1994	8.619
1995	8.351
1996	8.314
1997	8.290
1998	8.279
1999	8.278

Source: IMF *International Financial Statistics*

Tariffs on agricultural products will be cut from an overall average of 22 % to 14 %. Specific tariff cuts for selected products are shown in Table 11. Further tariff reductions agreed in the EU-China bilateral negotiations include rape oil (down from 85 % to 9 %), pasta (down from 25 % to 15 %), butter (down from 30 % to 10 %), mandarins (down from 40 % to 12 %), olives (down from 25 % to 10 %) and wheat gluten (down from 30 % to 18 %). Tariffs on all spirits are reduced from 65 % to 10 %.

Table 11. Tariff bindings offered by China

Commodity	Current tariff levels	Likely out of quota final bindings
	%	%
Barley	91	9
Beef	45	12
Pork	20	12
Poultry	20	10
Soybeans	114	3
Wheat, maize, rice	114	65
Milk powder	25	10
Wine	65	14*
Citrus	40	12
Cheese	50	12

Sources: Martin 1999, Hanrahan 2000, EU press release (see footnote 5), OECD 2000a.
Note: * denotes where China agreed to further reductions in bilateral negotiations with the EU after the US negotiations had been completed.

In addition, China plans to use a tariff reduction quotas (TRQ) system to expand market opportunities for a number of bulk commodities including wheat, maize, rice, soybean oil, cotton, wool, sugar, palm oil and rapeseed oil. All of these commodities, except for wool, are currently subject to state trading. The quantities of these commodities allowed in at the low 'within-quota' tariff rate (1-3 %) will increase annually from 2000 through 2004 (except for soybean oil which will be fully liberalised with nothing but a bound duty by 2006). No details are available on whether tariff rate quotas will be offered on other commodity imports, e.g. meat and dairy products. Private trade in agricultural products will be permitted for the first

Figure 9. Proposed tariff rate quotas for Chinese imports

Product	Year	TRQ quota (mmt)	1997/99 exports (mmt)	Non-state share in TRQs (%)	TRQ tariff rate (%)	Over-quota tariff rate (%)
Wheat	2000	7.3	1.47	10	1	77
	2005	9.6		10	1	65
Maize	2000	4.5	0.28	25	1	77
	2005	7.2		40	1	65
Rice	2000	2.6	0.29	50	1	77
	2005	5.3		50	1	65
Soybean oil	2000	1.7	3.68	50	9	74
	2005	3.3		90		9
Cotton	2000	0.743	0.64	67	4	69
	2005	0.894		67	4	40

Source: Hanrahan 2000

time. The detailed arrangements for individual commodities are discussed below, based on Colby et al. (2000).

Grains. China's offer for corn, wheat and rice will lock in important and long-term market access opportunities. No TRQ will be established for barley, but its tariff will be reduced to 9 %. The wheat TRQ will rise from 7.3 mmt to 9.3 mmt. This volume compares with the average import of 8.88 million tonnes in the period 1990-97. The starting level is equivalent to about 6 %, and the final level to 7.5 %, of wheat production in 1997. For maize, the starting level TRQ is six times the average import of 0.75 mmt over the period 1990-97. This is equivalent to 4 %, rising to 7 %, of domestic production in 1997. For rice, the TRQ accounts for only 2 % of domestic production. As the average domestic market price of all these grains at present is well above the world market price, there could be a strong demand for imports within the TRQ ceilings. Overall, the total TRQ for grains amounts to 22.1 mmt. In addition, there will be some imports of barley outside the TRQ system which will be offset by continued exports of low-quality rice. Given that grain consumption in China in 2005 is projected to be around 420 million tonnes, these limits will allow China to maintain its 95 per cent grain self-sufficiency objective even after accession.

Oilseeds. Tariffs are bound at low rates on soybeans (3 %) and soybean meal (5 %) and quota limits are eliminated. China will phase out quantitative restrictions and liberalise trade completely for soybean oil by 2006. Because domestic prices are above world prices, and because the TRQ is much larger than current imports, there will be a significant trade impact. The EU succeeded in increasing the tariff quota for rape oil but no details of its size have been given.

Meats. China is the world's largest consumer of pork. China will reduce its tariffs on frozen pork and offal from 20 % to 12 % by 2004 under the US bilateral agreement. China will reduce its tariffs from 45 % to 12 % on frozen beef and from 45 % to 25 % on fresh/chilled beef, while for poultry China will reduce tariffs from 20 % to 10 %.

Cotton. China is the world's largest producer and consumer of cotton, accounting for 20-25 % of the world's total in both categories. Under the US Agreement, China will establish a

large, low-duty TRQ for cotton with a substantial share reserved for private importers. The impact of accession will be significant because the starting TRQ is much larger than current imports, equivalent to more than 15 % of China's production in 1997, and the world price is lower than the domestic price.

Fruits. China will cut tariffs on a number of fruits and fruit products.

As noted above, only companies that receive specific authorisation from the Chinese government are currently allowed to import into China. Under the US Agreement, China has committed to allow any entity to import most products into any part of the country within three years of accession. At the end of this transition period, all foreign and domestic enterprises will have trading rights. A select list of products will be partially exempt from this rule. Some trade will be channelled through China's state-trading enterprises (including wheat, corn, rice and cotton; however, state trading will be phased out for soybean oil). However, in the case of the TRQs for these products, a growing share of the rising TRQ imports is reserved for non-state trading entities to encourage private sector participation in China's trade activities. China has also committed to liberalise distribution services for all agricultural products, except tobacco, allowing foreign companies to distribute and market their products in China.

Following these reforms, China's trade regime will be based on the use of tariffs for import protection, except on the commodities subject to state trading. Even for these commodities, tariff commitments will play an important role. State trading enterprises (STE) are free to choose the quantities they import as long as these quantities meet the market demand at a domestic price less than the import price plus the tariff binding. If the quantity that the STEs choose to import are insufficient to meet market demand at this price, the domestic market price would rise until the protection provided exceeded the level permitted by the WTO Agreement.[39] To avoid this occurring in times of domestic short supplies, STEs must allow additional imports if the domestic price rises substantially above world market prices. If an STE should consistently fail to allow adequate imports, it would violate the obligation to provide protection that is not, on average, in excess of the amount allowed in the schedule (Martin 2000).

The STE concessions also apply on the export side. As part of the EU-China bilateral agreement, China has agreed to liberalise the export monopoly on silk. Overseas firms will be able to buy raw silk directly from Chinese producers (who make up 70 % of the world total), whereas previously all purchases had to go through state export channels. This is expected to benefit the EU's numerous manufacturers of ties, scarves and other high value silk garments and accessories.

China has further agreed not to use export subsidies on maize, cotton and rice. It has agreed to cap and reduce domestic subsidies and to make them more transparent and predictable. The specific level of reduction will be determined in protocol negotiations within the Working Party on accession. The Working Party is divided on the issue whether China should be granted developing country status with respect to domestic subsidies. China is

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[39] Article II.4 includes a provision to regulate the circumvention of tariff concessions through import monopolies, whether state-owned or not. It prohibits parties from operating import monopolies 'so as to afford protection on the average in excess of the amount of protection provided for in [their] Schedule'. This rule means that, in principle, the size of the percentage mark-up should be no more than the percentage tariff.

holding out for the 10 % *de minimis* exemption and more favourable treatment of certain domestic support policies which would follow from its acceptance as a developing country.

China has also agreed to abide by the terms of the WTO SPS Agreement which requires that animal, plant and human health import requirements be based on science and risk assessment. The EU and China have signed an SPS Agreement that provides for compliance by China with the WTO's SPS Agreement, as well as resolving a number of bilateral SPS trade frictions. This agreement will be supplemented by subsequent agreements with individual EU member states, to be concluded before China's formal entry into the WTO.

2.2.3. Political economy of the Chinese offer

China's agricultural offer is a strikingly liberal one which will create a strong basis for open trade. The tariff reductions for the principal products such as grains, meats, soybean oil and cotton are much larger than the reductions required by the Agreement on Agriculture. They are also a significant reduction on the schedules tabled by China at the end of the Uruguay Round, although significant out-of-quota tariff protection will still remain for food grains. The TRQs are well above the current levels of China's imports (though perhaps not of imports earlier in the 1990s). Large shares of the TRQs will be allocated to the private sector to ensure the fulfilment of these TRQs. The implementation period of the commitments is five years, the developed country limit, and only half that allowed to developing countries.

The extent of China's offer should also be assessed in the light of the counterfactual level of protection. During the 1980s, agricultural protection was frequently negative for many major commodities, with implicit import subsidies used to maintain prices for urban consumers below world prices. During the 1990s, agricultural product prices have tended to be much more closely aligned with world prices and average protection rates appear to have been, on average, very close to zero. However, there has been significant year to year variation in protection rates, particularly for grains, and domestic prices of the major grains have frequently been higher than international prices in recent years. The WTO disciplines will prevent China from following the path to ever-increasing protection pursued by the earlier East Asian miracle economies.

Why has China agreed to such a radical set of constraints on its future agricultural policy? How were the forces calling for greater agricultural protection defeated? This is relevant to understanding the stability of the political coalition around the current WTO offer.

The demand for agricultural protection in China comes not from farmers but from bureaucrats, administrators and agricultural scientists in general[40]. The Ministries of Commerce, of Foreign Trade and Economic Co-operation and of Agriculture represent a strong interest group in China's agricultural policy. The Ministry of Commerce controls a large part of internal trade in agricultural commodities and in agricultural inputs. Its monopoly in domestic distribution would be undermined by trade liberalisation both internally and externally. The Ministry of Foreign Trade and Economic Co-operation maintains a monopoly over international trade in agricultural commodities through its foreign trade corporations. Their role and influence would also be undermined by trade liberalisation. The political influence of the Ministry of Agriculture is also increased if the

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[40] This section draws on the section 'The political economy of China's agricultural policy', in Huang and Yang (2000). See also Huang Y. (1998).

food self-sufficiency target is retained, and this will require permanent attention and increased resources for the Ministry in the long term. Further, agricultural scientists and economists also benefit from such a policy as a large part of their research and teaching is financed by this Ministry. What seems to have happened is that the reform-minded group in the Party has got the upper hand and has been able to push through the liberalising trade package despite these opposing interests.

Farmers' lack of involvement in lobbying for protection may be partly explained by the size of the farming population and underdeveloped communication and transportation facilities in rural areas. But Huang and Yang (2000) also point out that agricultural protection may not necessarily benefit farmers. In the mid-1990s, non-agricultural activities already account for more than half of farmers' net income. The growth of rural industrialisation has been one of the success stories of China's development strategy. Rural enterprises' share of GDP rose from 2 to 4 per cent in the 1970s to 30 per cent by 1999 and it dominated the export sector by the mid-1990s. Rural enterprises now employ 35 per cent of the rural labour force and the contribution of non-farm income to farmers' income has risen sharply from 17 per cent in 1980 to 47 per cent in 1999 (Huang J., 2000). Agricultural protectionism would only slow the growth of rural industrialisation.

What about concerns about China's food security? Motives for grain self-sufficiency, in addition to national pride, include protecting China from fluctuating grain prices on world markets, avoiding a shortage of foreign currency, and fostering domestic grain production in order to protect farm incomes. However, as noted above, the Chinese negotiators have limited the TRQs on food grains to a level which will allow the achievement of the 95 per cent self-sufficiency target, and have been careful to ensure that protection will remain high for food grains at 65 % for out-of-quota imports.

More fundamentally, the delay in gaining WTO access and the 15 years of negotiation has allowed society's perspective on the benefits of agricultural trade to change (Huang and Yang, 2000). Past experience has shown that reform can be much more easily carried out during economic upturns. China's strong balance of payments reserves (now around $140 billion) has reduced the fear that China may not be able to afford food imports if world prices rise dramatically, while it may have greater confidence that WTO rules will reduce the possibility of China being discriminated against in trade practice, including the use of trade embargoes (Huang and Yang, 2000). The grain self-sufficiency policy has led to massive grain reserves which can prevent major price increases in the near future, as shown by the response to the severe drought conditions in 2000. There is greater optimism about the ability of labour-intensive food exports to earn foreign exchange to cover food imports. Market prices of meats, fruits, vegetables and some other products are much lower in China than those on world markets. With greater liberalisation of trading rights, China's exports of these products should increase. The reduction in tariffs will also avoid damaging the development of China's value added agri-food industries. The main constraint to increased exports of labour-intensive products is not price levels but product quality. China may also expect to benefit from WTO rules which prevent the arbitrary use of sanitary and phyto-sanitary standards as import barriers in export markets.

2.3. China's likely food situation over the next ten years

Rapid economic growth is radically changing the economic environment for China's food production and demand and makes projections particularly uncertain. On the demand side,

food consumption is being heavily influenced by the demographic changes underway, by urbanisation and by the diversification of diets which is taking place as a result of rising incomes. On the supply side, production trends are being influenced by the shift of comparative advantage from agriculture to other sectors and increased competition for resources such as land, labour and water, by technology and irrigation infrastructure investment and by changes in public policy which influence the incentives facing farmers.

Much of the interest in undertaking projections of China's food situation is stimulated by the question whether China will continue to be able to feed itself in the future. Thus most projections focus on the Chinese grain economy and, in particular, on its likely level of net grain imports in the future. Import projections are even more hazardous than supply and demand projections because imports are the difference between two very large numbers. Thus a small change in either projected supply or demand in the future can have an enormous impact on projected imports. While most authorities expect China to become more dependent on grain imports over time, very different estimates of the pace and extent of this change can be found in the literature.

The conventional wisdom is that grain markets will experience a sustained demand increase driven by growth of population (expected to reach 1.6 billion in 2020), rapid urbanisation, rising income levels and the expansion of the livestock sector (as a consequence of growing meat consumption). These factors are unlikely to be matched by compensating shifts in the supply of grains due to (i) the transition of land, labour and capital to non-agricultural uses, (ii) a slowdown in yield growth, and (iii) environmental degradation (erosion, salinisation). With only 7 % of world arable land but 22 % of the world's population, China's comparative advantage is likely to shift from land-intensive commodities to labour-intensive products. As a result, net grain imports are projected to increase. A number of estimates of net grain imports are reported in Table 12. These projections are now rather dated, having been carried out in the first half of the 1990s. They are reported here to underline how different studies conducted with the same data and at approximately the same time can produce very varied numbers.

Table 12. Estimates of China's net grain imports, million tonnes

Year	Brown	Rosegrant et al.	Huang et al.	USDA	World Bank	OECF	Wang and Davis
2000	63 (17.7 %)	18 (5.1 %)	24 (6.8 %)	25 (6.8 %)	11 (3.1 %)	18 (5.1 %)	27 (7.8 %)
2005	108 (30.4 %)	16 (4.5 %)	25 (7.0 %)	32 (9.0 %)	14 (3.9 %)	52 (14.6 %)	27 (7.8 %)
2010	155 (43.7 %)	15 (4.2 %)	27 (7.6 %)	39 (11.0 %)	22 (6.2 %)	104 (29.3 %)	32 (9.3 %)

Source: Felloni et al., 2000. Elaborated from Fan and Agcaoili-Sombilla, 1997 and Wang and Davis, 2000.
Note: Figure in brackets represent the deficit as a percentage of 1995 grain domestic production (345 mmt). The sources for these projections are as follows. Brown's projections are from a Worldwatch Institute study published in 1995. Rosegrant et al. projections are based on the International Food Policy Research Institute model and published in 1995. Huang et al. use the same model but updated to 1997. The USDA projections are from a 1996 study of international agricultural projections. The World Bank study was published in 1993 while the OECF projections come from a research study conducted by the Japanese Research Institute of Development Assistance of OECF and published in 1995. Full references in the Felloni et al. study except for Wang and Davis. Their figures quoted here are for their 'most probable' outcome.

More recent studies published by three of the main agencies which undertake medium-range agricultural projections – the US Department of Agriculture (USDA), the OECD and the Food and Agricultural Policy Research Institute (FAPRI) - indicate much more limited import growth than indicated in Table 12 (see Table 13). The USDA Baseline to 2010, which excludes China's potential accession to the WTO, projects only slow growth in China's imports of most commodities. However, it recognises that policy rather than market forces determine much of China's trade in agricultural commodities and significant uncertainties exist regarding future policies in China.

The USDA believes that the recently announced changes in China's grain procurement policy (to discontinue price support for lower quality grains) will imply somewhat lower future grain area, but that the trade impacts of these policy changes are expected to be more than offset by other factors. These factors include very high grain stocks that are likely to be reduced over the next decade, somewhat slower growth in incomes and food demand, and increased government investment in agricultural research, development and infrastructure that is likely to have a positive impact on crop yields. The USDA projects China's grain imports to grow slowly from less than 2 million tonnes in 2000 to around 10-11 million tonnes in 2010. The OECD Agricultural Outlook 2000-2005 covers a shorter period but reaches the same conclusion. By 2004/5 the OECD projects total grain imports of 7.3 million tonnes which appears to be close to the USDA estimate for that year. The FAPRI figure for 2010 is also close to the USDA one. It sees China re-emerging as a significant buyer on world wheat markets although imports remain far below their historical levels. China also comes to depend increasingly on imported maize during its baseline as rising domestic feed use outruns domestic production. Both the USDA and FAPRI see China remaining a net rice exporter over the period.

In recent years, China's trade in soybeans and products has seen a dramatic swing from large state-sanctioned imports of soybean meal and soybean oil to importing enormous quantities of soybeans. These policies favouring oilseed imports and domestic crush imply significant growth in China's oilseed imports over the next decade. The FAPRI projections are more optimistic about the capacity of China's domestic crushing sector and project somewhat higher import growth than the USDA. As a result, it foresees China becoming a small net exporter of soybean meal over the period while the USDA projects somewhat smaller imports of beans but larger imports of soybean meal. Both the USDA and FAPRI project that soybean oil imports will double over the baseline.

Because government policy restricts meat imports in favour of domestic production, accomplished through high meat import tariffs and a restrictive import-licensing regime, China is not projected to be a significant importer of beef and pork over the next decade despite strong income growth and subsequent meat demand growth. This preference for domestic meat production is one of the factors behind rising domestic coarse grain consumption and imports to feed the growing livestock numbers. The USDA and OECD foresee a continuation of the small net pigmeat exports of recent years, while FAPRI projects a small import demand. China's poultry imports are projected to grow steadily up to 2010.

Figure 10. USDA projections of China's imports to 2010

	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11
Rice	-3.4	-3.4	-3.5	-3.6	-3.7	-3.8	-3.9	-4.0	-4.2	-4.4	-4.5
Coarse grains	2.7	4.7	5.0	5.1	5.6	6.3	7.0	7.9	8.8	10.0	11.3
Wheat	2.0	2.7	2.8	2.8	3.0	3.1	3.3	3.4	3.6	3.8	3.9
Total grains	1.3	3.9	4.2	4.4	4.9	5.6	6.4	7.2	8.2	9.4	10.7
Soybeans	7.3	7.8	8.0	8.3	8.6	9.0	9.4	9.8	10.2	10.7	11.2
Soybean meal	1.0	1.6	1.9	2.2	2.5	2.8	3.1	3.4	3.7	4.0	4.3
Soybean oil	0.8	0.8	0.9	1.0	1.1	1.2	1.2	1.3	1.4	1.5	1.5
	2000	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
Poultrymeat	1,210	1,250	1,317	1,351	1,384	1,418	1,455	1,473	1,492	1,511	1,530
Pigmeat	-110	-110	-111	-112	-113	-114	-116	-117	-118	-119	-120

Source: USDA Agricultural Baseline Projection tables, February 2001, available from www.ers.usda.gov/briefing/baseline/

Note: Grain and oilseeds imports are expressed in million tonnes; meat imports are expressed in thousand tonnes. Exports are represented with a negative sign.

Figure 11. OECD projections of China's imports to 2005

		97/98	98/99p	99/00e	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06
Wheat	mt	0.8	1.2	0.6	1.6	1.6	1.6	1.9	1.9	1.7
Coarse grains	mt	2.2	2.6	3.4	4	4.2	4.4	4.5	4.8	5
Rice	mt	0.4	0.3	0.4	0.5	0.5	0.6	0.6	0.6	0.6
Total grains	mt	3.4	4.1	4.4	6.1	6.3	6.6	7	7.3	7.3
Oilseeds	mt	4.2	5.1	6.1	6.7	7.2	7.3	7.5	7.4	7.3
Vegetable oils	mt	2.5	2.9	3.4	3.6	4.2	4.4	4.3	4.3	4.3
		1997	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**
Poultrymeat	ktrtc	413	236	431	662	732	856	919	939	1009
Pigmeat exports	ktcwe	162	144	139	140	140	128	119	113	108

Source: OECD Agricultural Outlook, 2000-2005

Figure 12. FAPRI projections of China's imports to 2010

	00/01	01/02	02/03	03/04	04/05	05/06	06/07	07/08	08/09	09/10	10/11
Wheat	1.00	2.53	2.99	3.63	3.99	4.45	4.95	5.19	5.42	5.61	5.65
Rice	-2.95	-2.35	-2.80	-3.76	-3.73	-3.36	-3.24	-3.20	-3.03	-2.87	-2.89
Maize	-4.05	-3.07	-2.56	-1.93	-0.20	0.89	2.43	3.75	5.11	6.14	6.92
Barley	2.40	2.59	2.60	2.60	2.60	2.63	2.73	2.88	2.98	3.06	3.14
Total grains	-3.6	0.2	0.9	1.3	3.5	5.4	7.7	9.5	11.4	12.8	13.7
Soybeans	7.65	9.271	10.682	11.995	12.976	13.586	14.177	14.732	15.342	15.823	16.337
Soybean meal	0.785	0.743	0.766	0.596	0.586	0.471	0.422	0.266	0.259	0.073	-0.037
Soybean oil	0.6	0.716	0.656	0.671	0.722	0.778	0.854	0.921	0.982	1.085	1.173
Year	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
Beef	31	44	51	53	45	37	30	24	21	18	16
Pigmeat	10	9	19	-4	-8	6	23	18	13	22	32
Poultrymeat	770	775	772	773	789	805	819	832	842	850	859

Source: FAPRI US and World Agricultural Outlook 2001, available at http://www.fapri.org/Outlook2001/outlook2001.htm

Note: Grain and oilseeds imports are expressed in million tonnes; meat imports are expressed in thousand tonnes. Exports are represented with a negative sign.

2.4. Consequences of China's WTO offer

The projections just reviewed are all based on the technical assumption of unchanged policies. They take into account announced policy changes such as the implementation of the URAA, but they do not incorporate the likely impact of China's accession to the WTO. China's membership will radically change the terms of access to its domestic market. Tariff reductions, larger import quotas and more transparent/challengeable SPS regulations will be complemented by curbs on the dominant role of STEs and by allowing private traders access to TRQs. In addition, China's overall economic performance is likely to improve, raising incomes and stimulating further consumption of food and feedstuffs. Finally, open borders are likely to bring about domestic policy changes, in particular to the governors' grain responsibility system, which will bring about additional import needs.

Will China be able to sustain agricultural growth, achieve food security, and increase farmers' income with the process of agricultural trade liberalisation? Some researchers claim that the impacts of China's accession to the WTO on China's agricultural production and trade are marginal. Others believe that while both China and the rest of the world will benefit from China's WTO accession for the economy as a whole, the impacts of trade liberalisation on China's agricultural sector and its national food security will be significantly adverse. These fears are countered by those who point out that the prospects for China's exports of labour intensive agricultural products such as fruits and vegetables has received much less attention. Many of these exports face high trade barriers particularly in China's regional trading partners. WTO accession will give China the opportunity to press for reduction in these barriers to help create improved market access opportunities (Martin, 1999).

In this section, the available quantitative evidence on the likely impact of WTO accession is reviewed. These studies use existing projection models to simulate the likely impact of China's accession. The published studies differ both with respect to coverage (grains only or the entire agricultural sector) and modelling approach (partial versus general equilibrium models). Nonetheless, there is broad agreement on the likely impacts on the basis of the empirical studies which have been completed to date.

2.4.1. Partial equilibrium models

The great strength of partial equilibrium models in projecting commodity production and trade is the level of detail they can employ. Models designed mainly for projection purposes also tend to be reviewed in the light of expert judgement. This section reviews the results of simulating China's WTO accession using three partial equilibrium projection models: the OECD's Aglink model (Schmidhuber, 2001); the CAPSIM model maintained by the Centre for Chinese Agricultural Policy at the Chinese Academy of Agricultural Sciences (Huang, Rozelle and Rosegrant, 1999; Huang, Chen, Rozelle and Tuan, 1999; Huang, 2000) and which in turn is a development of the IMPACT model developed at the International Food Policy Research Institute; and the Country Linked System of models (CLS) developed at USDA's Economic Research Service (Colby et al. 2000). The baseline projections of Chinese production, demand and trade for the OECD and USDA models were discussed in the previous section. In this section we focus on what these models say about the consequences of WTO accession.

WTO accession consequences in the OECD Aglink model

Two different scenario simulations have been published using the OECD AgLink model to assess the impact of Chinese WTO accession. The earlier one simulated a stylised WTO accession in which a TRQ of 22 million tonnes for wheat, rice and coarse grains was introduced (with a prohibitive out-of-quota tariff), tariffs on other agricultural imports were reduced by 50 per cent, GDP was assumed to grow by an extra 1 per cent due to trade liberalisation, and the 'governors' grain responsibility system' was phased out (OECD, 2000). The later simulation examined the impact of applying the tariff reductions and TRQs agreed in the US-China and EU-China bilateral agreements, plus in addition a GDP growth increase of 1 per cent per annum together with a reduction in domestic subsidies (intended to represent the effect of domestic policy reform) (Schmidhuber 2001)[41]. The results of this second scenario simulation are reported in Table 14. The baseline for these simulations appears to be an earlier run of the Aglink model than that reported in OECD (2000b) and discussed in the previous section.

Table 14. Summary of OECD Aglink simulation of WTO accession

China's imports	Baseline projections to 2005	Scenario I: Implementing the US schedule	Scenario II: Implementing the EU schedule	Scenario III: Combined trade and domestic policy reform
		Deviations from baseline		
	mmt	mmt	mmt	mmt
Wheat	6.4	1.4	1.3	3.3
Coarse grains	8.04	0.68	0.71	7.0
Oilseed	7.67	0.295	0.202	5.1
Oilmeal	3.06	-0.093	0.470	0.740
Vegetable oil	6.2	2.0	2.5	3.0
Poultrymeat	1.089	0.207	0.201	0.302

Source: Schmidhuber, 2001

It is immediately clear that most of the action occurs in Scenario III when domestic policy reform kicks in. While the TRQs with low in-quota tariffs alone will lead only to a marginal increase in grain imports (from 14.4 mmt to 16.2 mmt), this could increase to 24.7 mmt if domestic policy reforms are accelerated by WTO accession. Under Scenario III, imports would reach the agreed TRQ levels by 2001 (for wheat) and 2003 (for maize) respectively. Tariff cuts alone have little impact on the import demand for oilseeds or oilmeals (given that China's current trade regime for oilmeals is already relatively liberal and imports have increased substantially in the second half of the 1990s). There is a significant jump in oilseed imports in Scenario III and the TRQ for vegetable oils (the only TRQ in the oilseeds complex) would also become binding.

For livestock products, the OECD projects that lower tariffs will reduce import prices for meat and should stimulate domestic demand. At the same time, trade liberalisation will reduce prices for the main inputs of meat production, i.e. grains and oil cakes. For pigmeat, OECD foresees some increase in import demand despite the stimulus to domestic production

[41] Specifically, domestic policy reforms were modelled indirectly through an increase of 10 % in fertiliser prices, a reduction of 5 % in irrigation capacity and a reduction in total crop land through a reduction in the multi-cropping index.

although the main impact of liberalisation will be on the structure of pig production. This is explained by the predominance of the household pig production system in China. Given the low levels of compound feed used for pigs grown in backyards, the overall impact of lower feed prices on total pigmeat output is small. The OECD also projects that imports of poultrymeat will grow by about 200,000 tonnes or by about 20 per cent. The impact on dairy product imports will depend on how rapidly local processing plants can modernise to capture the expected increase in demand, and there could be additional demand for imported dairy products if the needed restructuring of local dairies is not carried through rapidly enough.

WTO accession consequences in the USDA CLS model (Country Linked System)

The commodities analysed for impacts on China's agricultural trade in the USDA study were maize, wheat, rice, cotton and soybeans and their products. The baseline scenario is that published by the USDA in 2000 and is thus one year older than the one analysed in the previous section. Although China's imports of poultry, pork and beef are expected to increase following WTO accession, China's livestock trade was not analysed. The WTO accession scenario investigated the impact of the US-China bilateral agreement, incorporating the agreed tariff cuts, the establishment of tariff-rate quotas for wheat, rice, maize, cotton and soybean oil, and the elimination of nontariff barriers to agricultural imports. Other assumptions made in the study include:

- no economic growth impact on China from WTO accession (i.e. the baseline projection assumption of 7.4 % average annual growth is maintained).
- Reduction in China's large agricultural commodity stocks in the near term.
- Relaxation of China's government policy favouring soybean imports over soy oil or soy meal imports.

Commodity highlights from the simulation include:

- while China was projected to be a net maize exporter of $426m on an annual basis under the baseline scenario, it becomes a small net importer on accession. However, China's imports are not projected to reach the full TRQ amount by the end of the projection period (2009) because the expected declines in price and production are not likely to be rapid or dramatic. South China is expected to be the destination for much of these additional imports, given the large demand for livestock feed in that region. North China will continue to procure supplies largely from domestic sources but, if production does not drop dramatically in response to lower prices, China could maintain significant levels of exports to neighbouring Asian countries.
- China has imported less than 2 million tonnes of wheat each year over the last three years, and stocks are relatively high. Imports are expected to increase under WTO accession because of the demand for high-protein-content wheat in urban areas and a decrease in trade barriers for the previously banned US Pacific Northwest soft white wheat. Stock adjustments could delay rising imports, but relatively modest changes in production and consumption would drive imports above baseline levels. The recent changes in government procurement policy which lowered wheat protection prices and initiated a phasing out of government purchases of low-quality wheat will reduce wheat production overall, and may modestly increase consumption and foster higher levels of imports[42].
- China is a large net exporter of rice and is projected to remain so after WTO accession. China's net rice exports are expected to increase slightly after accession.

[42] An independent study by Koo (2000) which examined the wheat market alone projected that China's wheat imports within the TRQ might increase by 3.4 mmt in 2005.

- WTO accession is projected to lead to increased cotton imports. Because China's domestic prices were fixed until recently at levels set during a period of near-record-high world prices, effective price reform could be expected to lower domestic prices and production and raise consumption. China's textile exports to developed countries are also expected to be greater with WTO accession, further increasing cotton consumption. With prices and production lower, and consumption higher, relaxation of import barriers would increase cotton imports. The key unknown is the size of cotton stocks (considered a state secret) and the speed of drawdown of these stocks.
- USDA projects increased imports of soybean oil and meal, offset by lower soybean imports in response to a change in the current trade policy that favours bean imports over imports of oil and meal. With liberalised trade in oil and meal, inefficiencies in the domestic crushing industry will reduce the competitiveness of domestic soybean products relative to direct imports.

Adding these impacts together, the USDA foresees an increase in China's net agricultural imports for the commodities analysed of $1.646 billion in 2005, and an average of $1.464 billion over the 2000-2009 period. This represents a doubling of China's expected net imports of these commodities in the baseline scenario and compares to total food imports of $6.9 billion in 1999. To this should be added the prospect of increased Chinese net imports of livestock and net exports in the fruit, vegetable and fish sectors which are not analysed in the USDA model. Overall, the impact of accession on China's agricultural trade balance can be expected to be modest.

WTO accession consequences in the Centre for Chinese Agricultural Policy CAPSIM model

The CAPSIM model's WTO scenario assumes that WTO membership implies complete free trade in all agricultural commodities by 2005. It is recognised that this sets an upper bound on the likely impact of the actual WTO accession package when it is agreed. Under the free trade scenario, domestic grain prices (except those for rice) would fall. China's net grain imports are projected to increase to 60 mmt in 2005 (a level representing about 12 per cent of total grain consumption in China) and about 48-55 mmt in the 2010 to 2020 period (these figures compare to 20 mmt and 19 mmt respectively in the baseline scenario).

The most serious impacts of trade liberalisation on grains are projected to be on maize, followed by wheat and soybeans. Under the free trade scenario, China's domestic maize production (projected to grow annually by only 0.7 %) would fall far behind maize consumption (projected to surge ahead under the influence of feed demand for livestock production by 5.9 % annually). Imports of maize are projected to increase from less than 2 mmt in 2000 to 39 mmt (nearly one quarter of maize consumption in China) in 2005 which would make China the world's largest importer of maize if it occurred.

The impact of trade liberalisation on wheat would also be substantial in the first few years as the wheat price declines. But wheat imports are projected to fall after 2005 with decline in population growth and a drop in demand due to migration (since urban residents consume less grain on a per capita basis than those in rural areas). In contrast, rice producers who are taxed under the present policy are expected to benefit from trade liberalisation, leading to substantial rice exports (7.12 mmt) in 2005.

The impacts of trade liberalisation on China's animal sector would also be significant. Here trade liberalisation would raise domestic prices of pork and poultry substantially[43], and those of eggs and fish moderately. Exports of livestock and fish products are projected to expand considerably, assuming China's exports are not hindered by other trade barriers (such as phyto-sanitary standards). Trade liberalisation is also expected to have significantly negative impacts on the production of sugar, oil crops and cotton, and substantial positive impacts on horticulture and the food processing industry.

The trade liberalisation consequences in the CAPSIM model for grain self-sufficiency and net imports are projected to be much greater than in the other two models, but this is because the scenario modelled in the CAPSIM study is full free trade. China's WTO accession package is very far from this, and thus the higher figures projected in this study should be substantially discounted. We draw the conclusion from these partial equilibrium models that WTO accession on the terms likely to be offered by China will have a small impact on its net grain trade and grain self-sufficiency ratio, but that there will be offsetting gains in the pigmeat, fruit, vegetable and aquatic sectors.

2.4.2. General equilibrium model estimates of WTO accession

In this section, we turn to examine the insights concerning the implications of China's WTO accession derived from computable general equilibrium (CGE) models. There are two key differences between partial equilibrium and CGE models.

First, CGE models take into account the inter-dependency between the agricultural and non-agricultural sectors of the economy and the fact that changes in output, factor use and prices in one sector will have knock-on and feedback effects on the other sector. In industrialised economies, where the agricultural sector is small relative to the economy as a whole, these inter-dependencies can often be ignored without affecting the reliability of the simulation estimates. In China's case, however, the fact that the agricultural sector still accounts for 18 per cent of its GDP and the fact that WTO accession will imply *simultaneous* changes in both non-agricultural and agricultural trade policies points to the importance of a general equilibrium approach to modelling these changes.

Second, CGE models impose accounting or adding-up constraints on the results of simulation exercises which means that any increase in production and input use in one sector must simultaneously imply a corresponding decrease in input use by other economic sectors. For example, trade liberalisation of protected agricultural sectors in a partial equilibrium model will normally imply a reduction in exports/increase in imports and lead to a deterioration in a country's balance of trade. In a CGE model, the general equilibrium constraint that a country's balance of trade must remain in equilibrium will often be imposed (the assumption made about the balance of trade is one element of the macroeconomic closure rules necessary to ensure a solution in CGE model simulations). This implies that the reduction in net agricultural exports as a result of trade liberalisation will bring about a reduction in the real value of a country's exchange rate sufficient to encourage a corresponding increase in the economy's net exports. This currency devaluation will both dampen the original effect of trade liberalisation on the agricultural sector and encourage an increase in non-agricultural

[43] This is in contrast to the OECD and USDA models which see trade liberalisation reducing domestic prices of these commodities.

exports, and it may be important to consider these consequences in an overall evaluation of the trade liberalisation scenario.

Despite these strong advantages of using CGE models to simulate the consequences of trade liberalisation scenarios, this type of modelling also has its drawbacks. First, the data requirements for global CGE models are much greater than for partial equilibrium commodity or multi-commodity models. To overcome this problem, an important project called the Global Trade Analysis Project (GTAP) was initiated at Purdue University and is now administered by a consortium of government agencies and research institutes including the European Commission (Hertel, 1997). One of GTAP's functions is to create and maintain a global database for use by CGE modellers. Most published CGE model simulations of China's WTO accession to date make use of the GTAP database. Second, in order to be tractable, CGE models must be designed at a high level of commodity aggregation. This means that they are often unable to capture the specificity of individual commodity sectors. Also, the high level of aggregation means that policy instruments are often incorporated in a rather crude fashion, for example, as *ad valorem* tariff equivalents, and much of the complexity of real-world import barriers may be lost. Third, the results are sensitive to the model structure and macroeconomic closure assumed. While model structure is also important in explaining the results of partial equilibrium models, the assumptions about economic behaviour in CGE models are often very strong and quite simplistic.

With these caveats, we now proceed to examine the results of five recent CGE studies which attempt to analyse the consequences of China's WTO accession for its agricultural production and trade (Wang 1997, Anderson et al. 1997, Huang and Yang 2000, Li and Zhai 2000 and Felloni et al. 2000). As noted, most of these studies use successive versions of the GTAP database. The GTAP 3 database represents the world (and China's) economy in 1992 and the GTAP 4 database is based on 1995 data. The base period is important because the pattern and level of protection in that period will determine the impact of trade liberalisation. The larger the initial distortion, the greater the induced impact from an assumed policy change. In the GTAP 3 database, China is shown as having a small net taxation of its food grain sector and significant positive import protection of its livestock and processed food sectors (Wang 1997)[44]. In the GTAP 4 database, China makes use of small export subsidies in its food grain sectors. These initial assumptions about China's trade distortions are critical in determining the outcome of simulating changes in trade policy arising from WTO accession. In contrast, the Li and Zhai study uses a single-country CGE model for China alone. They impose on this model shocks arising from trade liberalisation which are separately generated using a multi-region world CGE model, though details of this model are not given in their paper.

An attempt is made to compare the findings of these five studies in Table 15. This is not easy because the authors report their results in different formats. Also, the WTO accession scenarios being modelled are not consistent across these studies and are usually rather stylised representations of what is known about China's WTO accession terms. The simulations focus on tariff reductions and may fail to capture the more significant impacts arising from the removal of non-tariff barriers and the opening up of internal trade and distribution to greater competition. A brief summary of the simulations whose results are shown in Table 15 follows.

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[44] We noted earlier the contradictory evidence on whether import protection to livestock production is positive or negative in China. Other evidence on the pattern of Chinese agricultural support suggests that, while beef, mutton and dairy products are protected, pig and poultry production is taxed (Huang et al.).

Table 15. CGE estimates of the agricultural trade consequences of WTO accession for China

	Wang	Anderson et al.	Huang and Yang	Li and Zhai	Felloni et al.
Database	GTAP 3	GTAP 3	GTAP 3	China 1995 SAM	GTAP 4
Simulation year		2005		2010	2005
Change in net grain export	-$0.57 billion (1992 prices)			-US$5.09 (1995 prices)	-$14.8 billion (1995 prices)
Change in net agri-food exports	-$8.4 billion (1992 prices)	-$13 billion		-US$14.8 billion (1995 prices)	
Grain self-sufficiency:					
Change following WTO accession			Ca. –1 %		Increase
Level following WTO accession				92.3 %	

Source: Authors' estimates based on the cited studies. Yuan in the Li and Zhai study converted to US dollars at the rate 8.351.

The Wang model was constructed by the US Department of Agriculture. Its WTO scenario compares the consequences of China's WTO accession to a scenario which assumes that the rest of the world has implemented the Uruguay Round trade liberalisation and that China has implemented its 1996 unilateral tariff reductions. It simulates the effect of a further 35 per cent reduction for both agricultural and non-agricultural products, and also assumes the elimination of Multifibre Agreement (MFA) textile and clothing quotas. Taiwan is also assumed to become a WTO member in this scenario and makes and receives the same concessions. After becoming a WTO member, agricultural production in China would not be able to hold on to production factors bid away by the expansion of its manufacturing industries, especially the labour-intensive sectors such as textiles and clothing. The simulation results show an increase in China's net agricultural imports of $8.4 billion. Most of the impact, however, represents the effect on non-grain crops and processed foods. China's exports of non-grain crops (mainly cotton) fall because of the increased domestic demand for cotton arising from the expansion of its textile and clothing industry. The deep tariff cut on processed food products will result in lower prices and reduced domestic output and will increase imports dramatically (by about $4 billion). In contrast, the impact on China's net grain trade is fairly minor; the change in net grain imports of $0.57 billion would represent a decline in self-sufficiency of around 1 per cent.

Anderson et al. in their study find only a small impact of WTO accession on China's farm economy. Their WTO scenario is a one-third reduction in agricultural tariff equivalents, roughly in line with China's 1995 offer on the condition that it be admitted to the WTO. They conclude that international food prices and the volume of farm trade globally will be affected relatively little by China's WTO accession. The key rationale for this finding – which is entirely a *general equilibrium* explanation – is that the promised cuts to tariffs in other sectors are much larger than those for agriculture. The simultaneous reduction in protection of heavy industry will cause more resources to be released to (or less drawn from) the agricultural sector and help to offset the effects of lower protection for the agricultural sector.

The Huang and Yang study simulates the consequences in 2005 if China had adopted the Uruguay Round cuts agreed for developing countries (24 per cent for agricultural tariffs and a similar reduction in industrial tariffs). They also conclude that, in this scenario, total grain and agricultural production would only contract marginally, and that the adjustments in the grain sector are particularly small. Net exports of meat and non-grain crops (which includes fruits and vegetables) are projected to increase.

The Li and Zhai study, carried out at the State Council's Development Research Centre in China, reaches a similar sanguine conclusion. Its stylised WTO accession package includes lowering the average nominal tariff for industrial products to 10 per cent in the year 2005, a steady increase in the growth rate of import quotas of agricultural and food products over the period to 2005 and the replacement of all import quotas by a flat 10 per cent tariff in 2005. It also assumes that MFA restrictions on China's textile and clothing exports will be removed in 2005. This scenario is compared to the global economy following implementation of the Uruguay Round package in 2005 but where China maintains import quotas on the main food grains, cotton, vegetable oil and sugar. They project a very significant increase in agricultural imports as compared to their base scenario of $14.8 billion. A high proportion of this is driven by increased cotton imports to satisfy the demand for increased textile and clothing exports. Yet despite this overall impact, they project that China's grain self-sufficiency rate will remain very high at 92.3 per cent. As China will maintain significantly higher out-of-quota tariffs on grain in the actual WTO accession package than assumed in this study, these results exaggerate the decline in grain self-sufficiency which is likely to happen.

Finally, the Felloni et al. study concludes that WTO accession will *increase* China's grain self-sufficiency slightly. This finding reflects a feature of Chinese grain policy embodied in the GTAP 4 database, which records small export subsidies in the other grains category.

2.4.3. Discussion

We are now in a position to summarise the findings of the empirical studies on the likely impact of WTO accession. One concern has been its impact on food security, which in China is closely identified with grain self-sufficiency. The impact of trade liberalisation on agricultural production and trade depends on the relative size of the reductions in agricultural protection compared to the cuts in protection in the non-farm sectors. Because China still provides significant protection to its non-farm sector, a simultaneous reduction in this protection will mitigate the impact of trade liberalisation on food production and trade. Second, all projections are sensitive to the assumptions made about growth rates in both China and the rest of the world. Downward adjustments in world economic growth due to the Asian crisis or for other reasons will slow down the projected growth of demand for agricultural commodities in world markets. But while the slow growth of world demand for agricultural commodities will make it more difficult for China to maintain self-sufficiency, the downward adjustment of its own GDP growth will make it easier to maintain such a policy.

We conclude that there is a general agreement among both the partial equilibrium and CGE studies that, while WTO accession will lead to some increase in China's net agricultural imports, it is unlikely to have a dramatic effect on its grain self-sufficiency ratio. There is disagreement among the studies on what that self-sufficiency ratio is likely to be; the Li and

Zhai estimate of 92.3 per cent compares to that of Felloni et al. of closer to 75 per cent[45]. However, taking the partial equilibrium projection studies into account, this latter figure is an outlier. On the whole, there seems no reason to expect a dramatic deterioration in China's grain self-sufficiency ratio as a result of economic structural change, nor as a result of WTO accession. In the long run, it must be expected that China will more and more reveal its comparative disadvantage in grain production, leading to an eventual reduction in its grain self-sufficiency ratio. However, in the medium term, China has a number of alternative ways to promote grain self-sufficiency, including investment in research and infrastructure, liberalisation of its internal grain market and greater security of land tenure for farmers. All of these policies will continue to be available to the Chinese authorities after WTO membership.

There is also concern about the effect of agricultural trade liberalisation on the relative income situation of China's farmers. This issue is explored explicitly in Li and Zhai's (2000) model. They conclude that the main benefits of liberalisation will be captured by urban households (through the expansion of non-agricultural job opportunities in labour-intensive manufacturing) while rural household income will decline. However, their model compares WTO accession to a baseline in which protection of China's agriculture has steadily grown over the period to 2005. If liberalisation occurs before this protection has been put in place, these income effects would be attenuated or prevented. They note explicitly: ".. the rise in income disparity is due largely to the food self-sufficiency policy that would continue in the future, rather than to trade liberalization" (p. 19). As WTO membership will limit China's ability to pursue this route towards high agricultural protection, the Li and Zhai study overestimates the actual impact of accession on relative farm incomes. Huang and Yang (2000) also argue that because of the importance of non-agricultural activities for farmer's total income (where, in the mid-1990s, they already accounted for around half of farmers' net income), the growth of non-agricultural employment would have, on average, a positive effect on farm household income. However, they recognise that those farmers whose income relies heavily on agricultural and grain production would be hurt by agricultural trade liberalisation. It is also the case that the gains and losses will be distributed unequally across the regions. The coastal regions are likely to benefit overall from trade liberalisation, while the western and inland regions could be net losers. Even though we argue that the impact of WTO accession will be less significant than that shown in some studies, managing the income distribution effects will still be an important challenge for Chinese policy-makers.

[45] The actual self-sufficiency ratios quoted in the Felloni et al. study are 100 per cent for rice, 53.8 per cent for wheat and 75.2 per cent for other grains.

CHAPTER 3.
STRATEGIC INTERESTS IN THE CURRENT ROUND OF WTO AGRICULTURAL NEGOTIATIONS

This chapter examines the main issues at stake in the current round of agricultural trade negotiations. It examines the position papers tabled by the US and the EU in the negotiations up to and including the stock-taking meeting in March 2001[46]. The leader of the EU delegation, addressing this meeting, noted the diversity of the proposals which had been submitted over the previous year and expressed the view that consensus will not easily be found (WTO/G/AG/NG/150). The EU position is that a driving impetus from outside as well as from inside the negotiations is needed if there is to be a successful conclusion. It continues to argue for the importance of a comprehensive round, not only for the benefits it would bring in other sectors, but also for the negotiations on the WTO's built-in agenda including agriculture.

Chinese accession to the WTO will give it the right to participate in these negotiations. An obvious question is whether China's accession is likely to make agreement in the agricultural negotiations easier or more difficult. China's WTO membership will affect the alliances and coalitions that are formed between the principal participants. There is clearly a need to analyse the effects of Chinese WTO membership on the EU/US dialogue in particular. The principal objective of this chapter is to identify those areas where China's interests are likely to coincide with the EU's, and where those interests are likely to differ. China is not yet a participant in these negotiations, so the views attributed to it in this chapter are speculative but informed by the analysis of China's agricultural policy objectives and trade regime presented in the previous chapter of this report.

3.1. Market access negotiations

The market access negotiations revolve around (a) the depth of future tariff reductions (b) the pattern of future tariff reductions, (c) the practice of varying tariffs within the bound level (c) the extent of any increase in the tariff rate quotas, and (d) the administration of tariff rate quotas.

3.1.1. Tariff reductions

The central features of the US proposal on tariffs are to achieve the twin objectives of (i) substantially reducing or eliminating all tariffs by annual reductions over a fixed period, and (ii) substantially reducing or eliminating disparities in tariff levels both across countries and across products (tariff escalation). It also proposes the elimination of the Special Safeguard

[46] The US tabled its initial position paper on agriculture on 23 June 2000 entitled 'Proposal for Long-term Agricultural Trade Reform (WTO:G/AG/NG/W/15). This contained proposals for reform in each of the key areas of market access, export competition and domestic support. It submitted further notes elaborating on its proposal for domestic support reform (G/AG/NG/W/16) and on reform of TRQs (G/AG/NG/W/58). The EU has submitted four papers on specific issues it wished to raise in the negotiations (Blue box support G/AG/NG/W/17; the protection of regional food names G/AG/NG/W/18; animal welfare G/AG/NG/W/19; and export competition G/AG/NG/W/34). It also joined with a number of other countries in submitting a proposal on non-trade concerns (G/AG/NG/W/36). It subsequently submitted its comprehensive proposal on 16 December 2000 (G/AG/NG/W/90).

Arrangement, agreed under the URAA, whereby importing countries may temporarily raise duties in response to sudden import surges.

The EU proposes that the formula for tariff reductions should be a commitment as to the overall reduction of bound tariffs and minimum reduction per tariff line, as was the case in the Uruguay Round. Its arguments for the continuation of the Uruguay Round approach include (a) that it has been used before; (b) it corresponds to the language in Article 20 which calls for a progressive reduction in protection, and (c) it allows for sufficient flexibility in lowering tariffs to allow Members to take into account the particular situation of specific sectors.

Multilateral tariff reductions have two consequences. They increase market access abroad for a country's exporters, while opening up the domestic market to increased competition. It is thus not surprising to find net exporting countries pushing more enthusiastically for significant tariff reductions than net importing countries. Thus attitudes to future tariff reductions will be conditioned by whether a country is a net exporter of an agricultural commodity, and if so, the likelihood of significant gains arising from increased access to other countries' markets such reductions would bring. The US, EU and China are all currently net agricultural exporters, although their comparative advantage differs across commodities. The US is most interested in getting access for its grain and oilseeds exports. The EU might be thought to have a comparative advantage in dairy products, intensive animal production and processed foods. However, its potential to gain from improved market access to other countries is greatly restricted by the export subsidy disciplines introduced in the URAA. Until the EU gathers the political courage to reform the CAP further than it has managed to date, its interests as an agricultural exporter are severely limited.

In China's case, it has export interests in vegetables, horticultural crops, fish products and possibly intensive animal products (pigmeat and poultrymeat). Some indication of the extent of the barriers that China faces in its export markets can be obtained by examining the duty burden that China faces in accessing its export markets for agricultural products. Martin (1999) uses the GTAP 4 database to examine the value of exports from China and the duties levied on those exports to provide an initial indication of this. The data refer to 1995 and attempt to take into account the tariff equivalent of all duties, ad valorem and specific, that China faces in its export markets. He estimates that the average tariff rate faced by China on its agricultural product exports was, at 32 per cent, four times higher than the average tariff faced on its exports of other products. However, this average is pulled up by the particularly high tariff rates applied on its exports of grains such as maize to markets such as Japan, ASEAN and the Middle East and North Africa. As China is not likely to be a long-term exporter of grain, the import barriers to its remaining food and agricultural exports may be overstated by this figure[47]. Nonetheless, there are certainly export market gains worth going after for China in the current round of negotiations.

[47] Another reason why there may be overstatement is that there appears to be a calculation error in the table where he presents these data. Based on the data presented, the average tariff on China's exports appears to be 19 per cent. However, the discussion in the text is based on the figure which Martin uses in his discussion.

The costs of opening the domestic market to greater import competition must be set against these export gains[48]. This cost, in turn, will be a function of the existing level of import protection. China's average tariff of around 14 % post WTO entry will put it in the lowest quartile of countries with respect to agricultural protection rates (for data on mean agricultural protection rates by country, see Gibson et al., 2001). In general, China's tariff structure appears much lower than the EU (where the average is 30 per cent) but is on a par with that of the US (whose average is 12 per cent, both figures from Gibson, op. cit.). The implications of low tariff bindings for China's future stance in tariff negotiations are ambiguous. On the one hand, the fact that tariffs are low and thus provide little protection could mean that the Chinese authorities are not likely to object to further cuts in these tariffs[49]. The other possibility is that, precisely because protection is so limited at present, the Chinese authorities will be reluctant to see it further reduced. The experience of other liberal economies with low rates of agricultural protection (for example, some members of the Cairns Group) suggests that, on balance, the Chinese may feel they have more to gain from further reductions. However, while this may be their general stance, it will not necessarily apply across each commodity. Their attitude to lower tariff levels for individual commodities will depend on the trade balance and the existing level of protection for those commodities.

Table 16. Ad valorem tariff rates on agricultural products for US, EU and China

	US	EU	China post-WTO entry (projected)
Grains	2	53	65
Oilseeds	17	0	3
Oilcake	2	3	5
Vegetable oils	4	13	9
Meat: fresh beef, pork or poultry	12	41	25
Meat: frozen beef, pork or poultry	9	66	12
Dairy	43	87	10-12
Fruit: fresh	4	21	12
Vegetables: fresh	7	16	n.a.
Sugar beet	0	349	n.a.
Sugar cane	1	56	n.a.
Sweeteners	46	59	n.a.

Source: Gibson et al., 2001 for US and EU average tariff rates; China data from Section 2.2.2 in this report.
Note: US and EU tariffs are bound final tariffs after URAA implementation. They are unweighted averages of the *ad valorem* tariff equivalents levied on all tariff headings within that commodity grouping. Because many of the tariffs levied by the US and the EU are specific or mixed tariffs (in both countries 44 per cent of all tariffs are specified in non-*ad valorem* terms), calculating a tariff average requires making use of average import unit values in order to compute the *ad valorem tariff* equivalents. The Chinese tariffs are not directly comparable as they refer to representative commodities within the tariff group rather than being unweighted tariff averages. The effect of averaging would be to reduce the figures shown in the Chinese column. For example, in the grains category, the tariff on wheat gluten will be 18 %, on pasta 15 % while the tariff on barley will be 9 %. Once

[48] The term 'cost' here is used to denote the political cost to a government from import-competing interests. Under standard economic assumptions, trade liberalisation gives rise to economic benefits, not costs. Political costs can arise because the way in which economic gains and losses are distributed can be perceived differently by different groups in the population.

[49] Another motive for tariffs, particularly in developing countries, is as a source of government revenue. However, China has a very small dependence on agricultural tariffs for government revenue and the loss of this tariff revenue would be easily made up through other sources.

these lower rates are averaged in, the mean tariff on grains will be much less than the 65 % shown in the table which applies to bulk wheat, maize and rice only.

A comparison of the tariff structures of the three protagonists is shown in Table 16. The three protagonists have quite dispersed tariff structures (meaning that the tariff rates levied on individual commodities are quite variable), but the sensitive commodities in each country's tariff schedule are different. China has a pattern typical of many developing countries where the highest tariff protection is maintained on grains for largely food security reasons. Support to animal production is much more limited. Indeed, if domestic grain prices exceed world market prices due to protection, this could result in negative effective protection to China's intensive animal producers, although this will be mitigated by the essentially tariff-free import of protein feed sources. In the case of the US and the EU, on the other hand, the highest protection is provided to animal producers (particularly dairy and beef farmers) and to sugar beet growers. If account is taken of the fact that grains and oilseeds trade at close to world market levels, then the effective protection provided to US and EU dairy and beef farmers is even higher than the nominal tariff rates suggest.

These considerations suggest that Chinese interests in further tariff reductions will lie midway between those of the EU and the US. As an exporter, China will be keen to push for a significant further cut in tariffs in the next round. However, it will be conscious of the implications of any cut on its out-of-quota tariffs on wheat, maize and rice. There appears to be considerable 'water' in these tariffs at the present time[50]. Although domestic grain prices in China between 1997-2000 appear to be somewhat above world prices, over the longer run market prices are close to world market prices. As world market prices recover following the Asian downturn, current levels of protection may well disappear. Thus China may be less concerned about the impact of substantial tariff cuts than might appear at first sight. On the other hand, as these lower tariffs would be bound for the future, they would reduce China's freedom of manoeuvre to increase protection to its grain farmers in the future. But its ability to provide increased price support in future will in any case be severely circumscribed by its domestic support commitments (see below).

China's concerns would be further eased if the Uruguay Round formula were again applied, as this would allow it to limit the cuts in out-of-quota grain tariffs to 15 per cent. China may well calculate that, in the south-east Asian markets of most interest to it, the minimum reductions will apply largely to food grains (where it has little comparative advantage) rather than to the commodities where it can show export gains. Thus, China may not benefit greatly by insisting on a tariff-cutting approach which reduces very high tariffs disproportionately in order to achieve the harmonisation of tariffs as the US has proposed.

Some developing countries have called for a 'Food Security Box' which would allow developing countries to provide protection to their domestic food grain sectors on food security grounds, including exempting tariff protection to food grain production from

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[50] Producer prices in China are not as much above world market prices as the simple tariff figure might suggest, which might be an indication that some of the tariff protection is redundant and could be removed without an adverse effect on domestic prices – hence the phrase 'water in the tariff'. Another explanation for the low producer prices compared to the amount of tariff protection might be that grain handlers and processors in China are not as efficient as their overseas competitors and may take advantage of their monopoly position to depress prices to farmers. In this situation, lowering tariffs would have an adverse effect on domestic producer prices unless there was a simultaneous improvement in processing and handling efficiency.

reduction commitments and from tariff bindings. If this were implemented, and China were allowed to avail of these provisions, then any remaining grounds it might have for concern over the impact of substantial further tariff reductions would disappear. Its future ability to make use of special and differential treatment (SDT) will depend on the terms contained in the Protocol of Accession regarding China's developing country status and whether there are limits put on the extent to which China can make use of special and differential treatment under this Protocol. However, the EU has already rejected this particular developing country proposal, and China's WTO membership would strengthen the case for rejection. If China cannot maintain high grain tariffs under SDT, it is more likely to align itself with the EU view on the pattern of tariff reductions, and conversely.

3.1.2. Tariff rules and price stability

WTO membership will mean that China's grain economy will become increasingly integrated with the world grain economy. One of the concerns of China's policy makers is that volatility of world market prices will spill over into fluctuations in domestic grain prices in a more liberal market. There are contradictory interests at work here. Simulations of a wheat supply shock with the OECD AgLink model show that open borders reduce grain price variability but that the results differ depending on where the shock originates (OECD, 2000a). If the shock occurs in an OECD country, then in the absence of border measures China's domestic market reacts in full to the change in world prices which results from the wheat supply shock. This reduces international price variability but China's domestic wheat market has become more unstable. If the shock originates within China itself, then open borders implies that domestic price variability would be less while world price varability would be increased. China's interest is to free ride on the stabilising impact on world markets in the latter case, while being able to prevent the transmission of world price instability into its domestic market in the former case.

Tariffication in the Uruguay Round was expected to lead to greater transmission of world price fluctuations into domestic markets, and thus lead to reduced variability in world prices. In practice, however, the stabilising effect of tariffication has been undermined by the practice of countries varying *applied* tariffs in response to world market price changes. An applied tariff is the actual tariff rate applied by an importing country, and may differ from the bound rate. The rate is allowed under the rules of the WTO if it is at or below the bound rate in its Uruguay Round schedule.

Another source of potential world market price instability is that, although the Uruguay Round disciplines the use of export subsidies, its disciplines on the use of export taxes are much less strict. Article XI of GATT 1947 prohibits quantitative export restrictions but makes an explicit exception for 'export prohibitions or restrictions temporarily applied to prevent or relieve critical shortages of foodstuffs or other products essential to the exporting contracting party'. Article 12 of the UR Agreement on Agriculture tightens this a little by calling on Members, with respect to *new* restrictions on foodstuffs, to give 'due consideration' to the food security concerns of importing countries and requires adequate notice and consultation prior to implementation. Developing countries are exempt from these provisions unless they are regular food exporters. Both the US and the Cairns Group have proposed to prohibit the use of export taxes**,** including differential export taxes, for competitive advantage or supply management purposes.[51] The EU does not mention export

[51] The Cairns Group proposal is contained in WTO/G/AG/NG/W/93.

taxes in its proposal on export competition. The EU has made use of both practices since the signing of the Marrakesh Agreement in order to stabilise its domestic prices, even though this has been at the expense of destabilising world market prices[52].

China is likely to remain a net grain importer for some time, even if the magnitude of grain imports will be smaller than earlier studies in the mid-1990s had projected. On these grounds, one could expect that China would favour any moves which would enhance the *predictability* of trade flows, and would support the strengthening of multilateral rules on this issue. China's attitude to restricting the practice of varying applied tariffs is harder to call. It has set a high value on internal grain price stability and, to this end, it might be expected to support moves designed to increase the stability of world prices. On the other hand, the stability of world prices becomes a less important issue for China if it has the ability to offset these fluctuations by varying its own applied tariffs within its bound ceiling. This is an area where China could benefit by proposing a Special and Differential Treatment (SDT) rule which would confine the ability to vary applied tariffs to developing countries while disallowing its use to developed countries, including the EU. However, the difficulties of designing a legal rule which would discipline countries' use of applied tariffs may be insuperable. If countries felt that by reducing tariffs below their bound rate, they would be restricted in raising them again, then this would be as if the applied rate were bound and it would discourage countries from applying tariffs at rates lower than their bound rates. A more appealing alternative might be to allow developing countries, including China, access to the Special Safeguard Clause. This could even be restricted to developing countries under a SDT provision in the future.

A third issue under this heading is that a high proportion of agricultural tariffs take the form of specific or mixed tariffs rather than *ad valorem* tariffs. A specific tariff is levied as a fixed absolute amount per quantity of imports; an *ad valorem* tariff is levied as a percentage amount on the value of imports. Mixed tariffs combine elements of both. The US has proposed to denominate bindings and applied rates either on a specific or *ad valorem* basis, without the use of complex tariffs or combinations of tariffs. However, it does not go as far as to propose to restrict tariffs only to *ad valorem* tariffs.

Specific tariffs implicitly provide a measure of variable protection because they bear more heavily when import prices are low than when import prices are high. Specific tariffs also have a higher protective effect against lower-quality (and hence lower-value) imports than against high-quality imports. As the unit value of China's food and agricultural exports may be lower than for its competitors, the implication is that specific tariffs bear disproportionately heavier against its exports. For both these reasons, China would have an interest in encouraging more widespread use of *ad valorem* tariffs in the future.

3.1.3. Tariff rate quotas (TRQ)

An issue in the current negotiations is the future of tariff rate quotas. These were introduced to provide a guaranteed *opportunity* for market access in the knowledge that, even at the end of the Uruguay Round, agricultural tariffs would still be bound at very high levels. Exporting countries are calling for some increase in tariff rate quotas to improve market access opportunities. The US, for example, has proposed that these should be substantially

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[52] The March 1999 Berlin reforms maintain the instrument of export taxes within the market management measures available under the CAP. However, it was agreed that in future their use would be restricted to a safeguard measure in cases of extreme emergency.

increased by annual increments over a fixed period and their functioning improved, including dealing with unfilled quotas. A later paper addressed the problem of unfilled TRQs, attributed by the US to poor administration and unduly high in-quota duties (G/AG/NG/W/58). The US proposes to base the reduction of in-quota duties on the historical performance of TRQ fill rates: the lower the fill rate the deeper the duty cut. An automatic trigger mechanism is suggested to reduce in-quota duties in response to falling fill rates.

Given the disciplines on subsidised exports agreed by the EU in the Uruguay Round, increases in tariff rate quotas for the main CAP products could create difficulties in managing agricultural commodity markets. This is because any further increase in import quantities in a saturated market must either lead to a fall in the domestic market price in order to absorb these quantities, or it must lead to an equivalent increase in exports which is no longer an option under WTO disciplines. The EU's negotiating proposal is noticeably silent on the issue of increasing TRQs. However, it does propose that rules and disciplines should be defined to increase the transparency, the reliability and the security of the management of TRQs such that the concessions already granted are fully realised.

China could well be an ally for the EU in this. For China, the tariff rate quotas which count are those on grain imports. For other commodities such as meat, dairy products, sugar, fruits and vegetables, its domestic prices are sufficiently low that competing imports are not likely to create a problem. China will introduce tariff rate quotas on grain imports which will allow it to pursue its goal of 95 per cent self-sufficiency in food grains. Any further increase in these quota amounts would threaten this objective. While in a decade's time, a more industrialised China might feel more confident about relaxing this objective and relying to a greater extent on grain imports which would increasingly be destined for its animal feed sector, there are few signs that such a policy shift is being contemplated at the present time. China may therefore seek to retain its tariff rate quotas at current levels in the current round.

3.1.4. State trading enterprises and TRQs

In addition to the size of tariff rate quotas, the negotiations will focus on the administration of these quotas and the way in which quotas are allocated to exporting countries. The US has targeted, in particular, importing State Trading Enterprises (STEs). Importing STEs are often given monopoly rights to allocate quota shares within TRQs. In the interests of improved competition, it wants to deprive these so-called 'single-desk importers' of exclusive import rights. The EU in its proposal is concerned about the activities of exporting STEs but does not raise the issue of importing STEs.

From a WTO perspective, TRQs should be administered in such a way that they are filled by the most efficient and low cost suppliers. The most appropriate way to ensure this is to auction off the quota rights; however, the auction premium would act as a *de facto* tariff and thus could be construed as WTO-illegal. Other methods in use include first-come first-served, allocation on the basis of historic market shares, licensing and imports undertaken by STEs. The EU in the case of some commodities (e.g. beef, sugar, bananas, sheepmeat) has bundled preferential access agreement amounts into its minimum or current access quotas. It would find it difficult to agree to a competitive allocation process because this could undermine its commitments to countries to which it has offered preferential access.

China has granted monopoly import rights to State Trading Enterprises to administer TRQs for a limited number of commodities including wheat, maize, rice, cotton and oilseeds. The

United States has expressed concern that the activities of these STEs could act as a *de facto* market barrier and, by limiting imports, could underpin domestic prices. It therefore proposes to end exclusive import rights to allow private sector competition in markets controlled by single desk importers, and to establish WTO requirements that increase transparency in the operation of single desk importers, including their decisions on quality and source of imports. Its argument is that there is no reason to maintain their monopoly status if the STEs act in a purely commercial fashion and thus, by implication, the desire to retain their exclusive import rights reveals a hidden protectionist intent. In fact, WTO figures suggest that TRQs administered by STEs have a higher fill rate than other allocation mechanisms[53]. Further, China has agreed under the US-China Protocol (whose terms at a minimum will be included in the WTO Protocol) that the share of private trade in TRQ trade will gradually increase over the period of its accession to the WTO. It has further agreed that where unfilled quota remains three-quarters of the way through the year, it must be offered to private traders if they can make use of it.

Provided its experience of operating these rules is a satisfactory one, China may be more willing to further reduce the role of its monopoly STEs in the current round. However, there is some scepticism that China would be willing to give up the monopoly status of COFCO. However, since China has agreed that private traders must be permitted to import unused TRQ, then it might support the adoption of such a general rule in the GATT (Williams, 2000). If China wishes to retain a monopoly import status for its STEs, the EU must assess the probable cost of this in terms of potential lost exports to China. If it assesses this cost to be small, it may be willing to support the Chinese demand in this area in return for China's support for its ability to retain its current TRQ allocation mechanisms.

3.2. Export competition

On export competition, the central features of the US proposals are to *eliminate* agricultural export subsidies, by annual reductions over a fixed period, with respect to both the value and the volume of exports; to end the exclusive export rights of STEs[54]; and to conduct negotiations on Export Credit Programmes within the OECD[55]. The EU's position is that it stands ready to negotiate further reductions in export subsidies, on the condition that all forms of export subsidisation are treated on an equal footing. It wants officially supported export credits in agriculture to be covered by specific WTO rules and disciplines, strengthened provisions to prevent the abuse of food aid, and that in respect of the operation of State Trading Enterprises (STEs), cross-subsidisation, price-pooling and other unfair trade practices in exports be abolished. To that effect the operation of STEs should be subject to mandatory notification with regard to acquisition costs and export pricing.

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53 See the WTO Secretariat analysis of TRQ fill rates by administration method, G/AG/NG/S/8.

54 Exporting STEs exist particularly in certain Cairns Group (CG) countries, such as Australia, Canada and New Zealand. Thus disagreement between the US and the CG countries on this issue might well surface during the current WTO round.

55 Note that, as already mentioned elsewhere in this report, such negotiations have been in progress since 1994, without yielding any fruit so far. Contrasting with its desire for the abolition of 'classical' export subsidies, it appears possible that the US is deliberately dragging its feet on the issue of export credits.

3.2.1. Export subsidies and credits

It is generally accepted that, from the EU perspective, export subsidies have been the most binding of the WTO disciplines introduced following the Uruguay Round. Although there were a number of years in the transition period to 2000 where the EU did not fully utilise its permitted volumes, its scheduled limits are likely to be fully used from now on. There are only a limited number of commodities (wheat, pigmeat, cheese) where, even after the Agenda 2000 agreement, the EU is likely to be in a position to export without export subsidies. The EU accepts that a further reduction in export subsidies is a likely outcome of the current negotiations. It opposes the demands made by the United States and other exporting countries for the complete elimination of export subsidies.

China will enter the WTO with no entitlement to export subsidies and thus, at first sight, would have no interest in allowing other countries to maintain them. Indeed, as an exporter of fruits, vegetables, aquatic products and intensive animal products, it may feel that it would benefit from eliminating the possibility of the use of export subsidies by its potential competitors. However, if it sees that export subsidies are paid on bulk commodities which it mainly imports, and which turn the terms of trade in its favour, it might be persuaded that there are some short-term advantages in allowing other exporters to use export subsidies. It would probably be willing to include export credits within the definition of export subsidies for the purposes of the reductions (Williams, 2000).

3.2.2. Exporting state trading enterprises

In some WTO Members, State Trading Enterprises control a high share—in certain cases 100 %—of the exports of some agricultural products such as wheat and other grains or dairy products. As a result, 'single desk exporters' (enterprises with responsibility for domestic and export sales) account for large shares of world trade in certain products: about 40 % for wheat and 30 % for dairy products. The EU believes that their 'exclusive or special rights or privileges' confer on STEs considerable market power, which can result in unfair competition against other world market traders. It identifies three highly trade-distorting practices of STEs, i.e. cross-subsidisation, price-discrimination and price pooling, which can be identified as 'hidden' export subsidies.

This is an area where there is no disagreement between the US and the EU. The US also wishes to end exclusive export rights to ensure private sector competition in markets controlled by single desk exporters; to establish WTO requirements for notifying acquisition costs, export pricing, and other sales information for single desk exporters; and to eliminate the use of government funds or guarantees to support or ensure the financial viability of single desk exporters.

China will be affected by any agreement in this area to the extent that it will want to continue to channel grain exports through COFOCO in the future. Any rules which might be agreed in the current round would apply to its trading behaviour in the future. We have seen that China's grain marketing practices in the past have allowed COFOCO to export grain with an implicit export subsidy, in that it could purchase grain at a low procurement price from

farmers for sale on export markets[56]. Now that grain procurement prices in recent years have been above market prices, there is little rationale to continue this practice. China will probably not have any major interest in opposing strengthened rules and disciplines in this area.

3.3. Domestic support

The US proposals for domestic support reduction may well come to be regarded as the most revolutionary and, for that reason, the most keenly contested by the EU and other WTO contracting parties. On this issue, the main proposals are:

- To restrict domestic support disciplines to only two categories, 'exempt support' and 'nonexempt support'. The former of these categories corresponds with current 'green' and the latter with 'amber' payments. In other words, the US proposes to eliminate the present 'blue box' category of support, under which most EU agricultural support payments now fall. This may be seen as a direct consequence of the1996 FAIR Act, under which the US largely abandoned coupled deficiency payment support ('blue' box) in favour of diminishing decoupled PFC payments ('green' box).
- Nonexempt support 'to be reduced to a final bound level equal to a fixed percentage of the member's value of total agricultural production in a fixed base period'. Further, 'the fixed percentage [to] be the same for all members and reductions [to] be made through progressive annual reduction commitments over a fixed period.'

There are two notable features of this second proposal for the further disciplining of domestic support payments. First, the US wants countries starting at widely varying levels of domestic support to finish at the same level (at the end of the implementation period). Thus, hypothetically, suppose that the final level of support is set at 10 percent of the value of total agricultural production and the implementation period is 5 years. Suppose further that the initial level of support in country A is 35 percent whereas in country B it is only 20 percent. Then, to get down to a common level of 10 percent after five years, country A will have to make five annual cuts of 5 percent, compared with country B's cuts of only 2 percent per year. This proposal is clearly going to be harder to negotiate than the URAA's common 20 percent cut in domestic support payments (over six years). A second notable feature of the latest US proposal for reducing domestic support is that, as in the URAA, it apparently relates only to aggregate agricultural production, i.e. it is not commodity specific. Thus, referring back to the hypothetical example, neither country would need to commit itself to eventually reducing its domestic support payments to 10 percent with respect every one of the commodities it produces. Hitting the aggregate target would be the sole requirement. Thus scope would still exist for selected commodities to be relatively highly subsidised, provided that these were offset by sufficient production of relatively lowly subsidised commodities. This feature of the last agreement on domestic support reduction was much criticised by independent economist observers of the URAA.

A further notable feature of this set of US proposals is that, apart from the proposing to eliminate export subsidies, this time round there is nothing quite equivalent to the 'zero option' that the US adopted early in the Uruguay Round. Whereas tariffs are to be 'substantially reduced or (possibly) eliminated', nonexempt domestic support is to be reduced

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[56] Note, however, that the implicit taxation of farmers implied by this practice is not what the critics of single desk STE exporters have in mind when they criticise the potential of exporting STEs to engage in export subsidisation.

only to a common 'fixed percentage of the value of total agricultural production in a fixed base period'. The desired numerical value of the 'common level of support' is not specified. It is tempting to suggest that the US prefers to leave this question open until the amount of 'amber'support for US farmers written into the 2002 farm bill has been settled.

The US proposal to merge 'blue box' payments with 'amber' instead of with 'green', as permitted by the URAA, provoked an early adverse response from the EU. In its paper tabled on 28 June 2000, the EU argues that, due to the supply control conditions attaching to them, blue box payments have notably fewer spillover effects (to trade competitors) than amber payments do (WTO: G/AG/NG/W/17). In support of this argument, the paper cites the results of a recent empirical study commissioned by the OECD, which concludes that 'area payments [...] were found to be relatively more income efficient and less trade distorting than price support…..'[57]. This paper signifies that this is one of the issues upon which the EU intends to fight hard to maintain the *status quo*.

The EU has proposed that the reform process should be pursued by further reduction in the Total Aggregate Measures of Support (AMS) starting from the Final Bound Commitment level, by a further strengthening of the rules concerning non-product specific domestic support, and by a reduction of the *de minimis* clause for developed countries. It wants to maintain the concept of the 'blue' and 'green' boxes, as well as the general rules and disciplines applying to them, but is prepared to discuss the detailed rules on domestic support. It proposes that the criteria to be met by measures that fall into the 'green' box be revisited to ensure minimal trade distortion whilst at the same time ensuring appropriate coverage of measures which meet important societal goals such as the protection of the environment, the sustained vitality of rural areas and poverty alleviation, food security for developing countries and animal welfare. In particular, it wants specific disciplines to be applied to variable 'amber' box subsidies which boost export performance through providing compensation for variations in market prices. In this, it is clearly aiming at restricting the ability of the US to provide open-ended support through emergency aid packages in the future.

China has historically taxed or 'extracted surplus' from the agricultural sector in an effort to support industrialisation, although this situation appears to be changing. However, the objectives and manner of delivery of much of China's domestic agri-food policy and border measures are not well documented. Information on the precise nature of policy support to livestock and horticulture sectors, input subsidies and state involvement in the input sector and consumer subsidies has not been forthcoming from official sources (Gilmour, 1999). China's trading partners will require credible and officially-sanctioned information to be included as part of the Protocol of Accession.

Assuming that China has not had significant domestic support in the base period means that it would have a zero total AMS ceiling on such support. This would allow domestic support to be provided only if it complied with the criteria for inclusion in either the 'green' or 'blue' boxes or, if its support fell into the 'amber' box, up to the limits set by the *de minimis* assumptions. While this restriction may be of less significance where China has committed itself to low import protection and price support, it does have implications which concern the Chinese. One anomaly here is that the *de minimis* restrictions apply on a commodity basis

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[57] OECD, "A matrix approach to evaluating policy: preliminary findings from the Policy Evaluation Matrix (PEM) pilot studies of crop policy in the EU, the US, Canada and Mexico", Paris, February 2000. In this context, use of the term 'area payments' denotes blue box payments generally.

whereas the total AMS ceiling restriction which all developed countries face applies on an aggregated basis across all commodities. This allows developed countries potentially to provide much higher levels of support to sensitive commodities while still staying within their AMS ceiling than developing countries will be able to do in the future. Information suggests that China's entitlement to developing country status in claiming *de minimis* exemptions for domestic support is currently one of the sticking points in the negotiations in the Working Party on its accession. Until the outcome of these discussions is clarified, it is difficult to assess China's likely stance on domestic subsidies in the future. However, as China currently makes no use of 'blue box' subsidies and is not likely to in the future, there does not appear to be any immediate reason why it should support the EU position on this issue.

3.4. Non-trade concerns

3.4.1. Multifunctionality of agriculture

The EU insists that WTO rules should allow countries to recognise the multifunctional role of agriculture in promoting both rural development and the environment. In its view, trade should not take place in such a way as to destroy the functions of agriculture as an engine of rural development or in shaping the natural environment. It proposes that measures that aim at protecting the environment and at promoting the sustainable vitality of rural areas and poverty alleviation should be accommodated in the Agreement on Agriculture. Such measures should be well targeted, transparent, and implemented in no more than minimally trade-distorting ways.

In the preamble to its June 2000 position paper, the US claims to support policies that 'address nontrade concerns, including food security, resource conservation, rural development and environmental protection.' However, the US maintains that 'these objectives are best met through non-distorting means, with programs targeted to the particular concern, without creating new economic distortions, thereby avoiding passing the cost of achieving these objectives to other countries….'

China has a huge rural population, and rural development is very important to it. However, it is unlikely to have the budget resources to engage in direct payment programmes to its farmers, who account for 50 % of the population. It may, therefore, be receptive to the argument that targeted programmes to deal with environmental issues should be the preferred means as proposed by the US. It is unlikely to see merit in the argument that multifunctionality can justify price support measures to farmers. The EU has tried to make the multifunctionality argument more attractive to developing countries by suggesting that the concept could be extended to embrace their concerns with food security. However, this argument is unlikely to be acceptable to developing countries as a group who can point out that there are alternative means of achieving this end. While China might be persuaded to support the multifunctionality argument as a way of gaining concessions of more interest to it, the concept would appear to have little immediate appeal to the Chinese authorities.

3.4.2. Animal welfare

The EU has raised the need to ensure that trade does not undermine efforts to improve the protection of the welfare of animals in the agricultural negotiations (WTO: G/AG/NG/W/19). When a country provides for animal welfare standards that go beyond those applied by other

trading partners, it argues that consumers may not be provided with coherent information on the welfare standards to which imported products are produced, and that domestic producers may be economically disadvantaged.

It has suggested a number of ways in which animal welfare concerns could be addressed, including:

- the development of multilateral agreements dealing with the protection of animal welfare. This approach would be facilitated by the achievement of greater legal clarity on the relationship between WTO rules and trade measures taken pursuant to provisions of multilateral animal welfare agreements;
- appropriate labelling, compulsory or voluntary, as provided for under Article 2.2 of the technical barriers to trade (TBT) Agreement, could facilitate the wish of consumers to make an informed choice as regards food products, whether domestically produced or imported, including as regards the production conditions, e.g. products produced in compliance with certain animal welfare standards;
- the payment of compensation to contribute to the additional costs of providing higher animal welfare where it can be clearly shown that these additional costs stem directly from the higher standards in question. For any such compensation to be acceptable, it would have to have no or at most minimal effects on trade and production.

Most opposition to raising animal welfare within the WTO comes from developing countries who fear that, in a worst-case scenario, animal welfare rules could be used to block imports from countries with lower standards and would be introduced with protectionist intent. The United States, on past experience, is also likely to view this issue with great suspicion. The EU has tried to allay developing country fears by pointing out that its concerns with animal welfare are most acute in relation to highly-intensive and industrialised production methods for certain species, in particular poultry and pigs. This type of production is most often found in developed rather than developing and least developed countries.

China will undoubtedly want to take a view on this issue. In 1998, pork output in China was 46 per cent of the world total. Exports as a percentage of production are small and have been falling (from around 2 per cent of output in 1990 to less than 1 per cent in 1998)[58]. Pig production in China is undertaken in three different types of system. Based on a recent survey, about 80 per cent of pork production comes from pigs raised as a sideline by traditional 'back-yard' producers, 15 per cent comes from specialised farm households where pig production is the main occupation, and 5 per cent comes from large-scale commercial operations (USDA, *Agricultural Outlook*, March 2000). It is the industrialised pig farms which provide most meat for export. Due to quality and sanitary health standards China finds it difficult to gain access to developed country markets, and most Chinese pork exports go to Russia and South-East Asian markets. There will be export opportunities in Japan, South Korea and, eventually, Taiwan as these countries open up their livestock markets to imports under WTO rules, though these countries will be tempted to continue to protect their producers by implementing measures and technical barriers to trade. China may fear that greater flexibility by WTO Members to restrict imports on animal welfare grounds may limit its export opportunities for pigmeat in the future.

3.5. Special and differential treatment

[58] Information on China's pork industry in this paragraph is taken from Chen (2001).

Developing countries in the past played a limited role in global trade negotiations and often defined their interests in terms of seeking exemptions from general trade disciplines in the name of special and differential treatment (SDT). Although developing countries have come to see the benefits of integration into the world economy, the role and content of special and differential treatment in the current round remains an important issue for them. They have made clear that they want SDT to mean more than simply a longer time period in which to adjust to new trade and domestic support disciplines, and that it should embrace more favourable improvements in market access and greater flexibility in providing domestic support and protection than permitted to developed countries in any new agreement.

The EU has strongly supported the SDT principle. Specifically, it proposes that developed countries and the wealthiest developing countries provide significant trade preferences to developing countries, and in particular the least-developed. It also proposes that an examination be undertaken on ways to ensure that these trade preferences are rendered stable and predictable, in order to create the appropriate conditions for further investment in, and development of, the agricultural and agri-food sectors in developing countries. The EU itself has introduced its 'Everything but Arms' initiative which would extend existing duty-free access for exports from 48 least-developed countries to the remaining 10 per cent of EU tariff lines which are currently excluded from the EU's preferential access schemes, and which largely cover agricultural products covered by its Common Agricultural Policy regimes.

The EU further believes that domestic support measures that promote the sustainable vitality of rural areas and the food security concerns of developing countries as a means of poverty alleviation should be exempted from any reduction commitments. It also proposes to examine other ways to provide the necessary flexibility to developing countries to address these concerns, notably through a revision of the *de minimis* clause for developing countries.

The June 2000 US position paper includes proposals concerning developing countries. The US concedes the claim that, as in the UR, it would again be reasonable to make special concessions to developing countries respecting both improved market access (i.e. tariff reduction) and domestic support reduction. But no specific proposals are made on either of these issues. The US also enjoins fellow WTO developed member countries to continue giving technical assistance to developing country members.

Some observers have argued that China will want to strengthen the exceptions granted to WTO members for development purposes, as this fits into their perception that trade should be an adjunct to development policy rather than a direct means of enhancing social welfare (Kerr 2001). A key issue is whether China itself will expect to be covered by such exemptions or not. This issue may be decided in the ongoing negotiations on China's development status in the Working Party on its accession. Even leaving to one side WTO practice that a country's development status has traditionally been up to that country itself to decide, on all the usual economic criteria China would qualify as a developing country. The difficulty is that the sophistication of parts of its economy, combined with its very size in absolute terms, means that China's ability to compete in particular markets and to provide real competition to developed country industries is much greater than has been the case for developing countries in the past. Existing WTO Members will want to tie down the circumstances where China will be allowed to exercise its developing country status for WTO purposes in future. There is unlikely to be any objection where China seeks longer time periods in which to adjust its laws and administrative practices to WTO rules, for similar reasons to other developing countries. However, it remains to be seen to what extent it will

be able to claim the greater flexibility allowed to developing countries in terms of the rules themselves.

3.6. SPS issues

The EU has identified food safety as another important objective in the current negotiations (WTO: G/AG/NG/W/90). Technological innovation, the globalisation of food supply, rising living standards and greater awareness of the risks of foodborne illnesses have led the public in many developed countries to become increasingly concerned about this issue. In the Uruguay Round trade negotiations, a new Sanitary and Phyto-Sanitary (SPS) Agreement and a strengthened Technical Barriers to Trade (TBT) Agreement were brought in to provide a set of rules to govern behaviour in this area. However, the public in many EU countries has expressed concern that these rules could be used to force on to the markets products about whose safety there are legitimate concerns.

The key principle underlying the SPS Agreement is that countries have the right to decide on the measures they deem necessary to protect human, animal or plant life or health. However, to prevent abuse, certain disciplines are applied. Measures should be based on scientific principles, should not be maintained without scientific justification, and should not be applied in an arbitrary or unjustifiable way. While these principles work reasonably well in routine situations where the science is well-established, they are less clearcut with respect to novel risks where a scientific consensus has yet to emerge. The EU argues that food regulations must take account of the precautionary principle, which would allow countries to restrict the marketing of food which has been produced using methods where scientific evidence is insufficient or there is scientific uncertainty. This principle is recognised in a limited way in Article 5.7 of the SPS Agreement which stipulates that, if relevant scientific evidence is insufficient, members may adopt SPS measures, on a provisional basis, while seeking additional information about the risks posed by a hazard. However, this provision is more restrictive than what many consumer groups would like, e.g. the qualification by the word 'provisional'. The EU has therefore proposed that the application of the precautionary principle should be clarified. The US, on the other hand, does not favour opening the 1994 Agreement on Sanitary and Phytosanitary Measures to renegotiation.

Adoption of the SPS Agreement will pose a huge administrative challenge to China. China's trading partners will expect to be able to use the new trading opportunities opened up by accession and will put pressure on its quarantine authorities to either justify or remove any restrictive SPS measures that are impeding their legitimate trade (Australian Ministry of Agriculture, 2001). The consolidation of China's inspection and quarantine services under the new State Administration of Exit and Entry Inspection and Quarantine (SAIQ) should lead to a more co-ordinated, coherent and transparent approach in delivering these services (Gilmour, 1999). There are examples were current SPS practices restrict market access opportunities. For example, with respect to meat imports, China has yet to certify foreign companies to issue official inspection or quality licences. Inspection to approve prospective meat exporting plants is linked to the exporting firm's willingness to jointly register with specific, designated importers. China will find that its SPS measures are at times challenged, although it will be able to make use of the same framework, including the Dispute Settlement procedure, to make sure that its rights are also protected. China will want to adopt a cautious attitude to the use of SPS disciplines and will probably be willing to support the EU's call for a more explicit recognition of the precautionary principle.

3.7. Concluding remarks

These speculations on China's likely interests in the agricultural negotiations have identified only a few areas where China's immediate interests are likely to coincide with those of the EU. However, negotiations are also about designing trade-offs. Understanding the strategic objectives of the other participants can lay the basis for compromises where they agree to facilitate you in return for your agreement to support them on their sensitive issues. China will enter the negotiations with a number of strategic objectives: limiting the extension of its tariff rate quotas in order to safeguard its grain self-sufficiency objective, protecting the role of its state trading enterprises, limiting the degree to which it imports world market price volatility into its own market, lowering both tariff and non-tariff barriers to its own agricultural exports, and seeking greater flexibility as a developing country with regard to domestic support. The EU may find there is little here which significantly threatens its interests. There is certainly scope for a dialogue where the EU could seek support on those issues which are central for it in the negotiations, namely, limiting the reduction in export subsidies, retaining the 'blue' box for domestic support, gaining recognition for the precautionary principle with respect to food safety, and gaining acceptance of the legitimacy of support for multifunctional agriculture.

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