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agricultural trade

the changing environment for trade policy and agricultural prices

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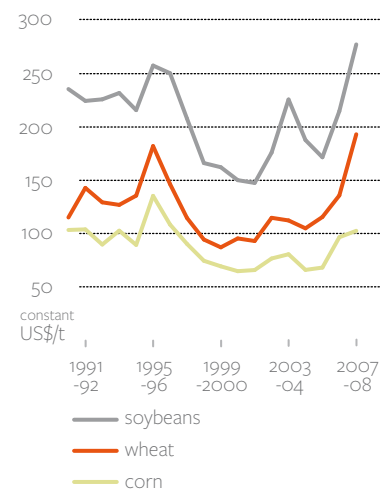
- Several major changes are currently occurring that have the potential to markedly affect agricultural trade and price prospects well into the future. Prominent among these are developments for biofuels, and trade and domestic reforms that involve substantial government policy elements.
- Also, in recent years, community concerns have focused on a range of environmental, health and animal welfare issues that can influence trade both directly and through government policies. Prominent among these issues are ‘food miles’ which link food transport and greenhouse gas emissions, genetically modified crops and animal welfare.
- In the background, there are also longer term fundamental underlying forces, including technological advances, reforms to governance and market structures, climate change, resource and environmental constraints, and population and income growth, that will affect future supplies, demand and prices.
- In this article a brief appraisal is made of agricultural and trade policies internationally and of a range of other factors that are likely to have major implications for future international trade and prices.

prices of cereals and oilseeds increased sharply in 2007

There were several factors influencing both supply and demand that combined to push up prices for grains in 2007 (figure a). These include:

- increasing use of grain and oilseeds for biofuels, especially in the United States
- adverse seasonal conditions for wheat in key producing areas, including Europe, Australia, Argentina and Canada, that resulted in a below trend global crop for the second year running which, in conjunction with buoyant demand, resulted in depleted stocks
- a sharp rise in some important agricultural input prices, especially for fuel and other inputs derived from petroleum
- increasing demand for agricultural products from 2007 being the fourth year straight with strong global economic growth — much of that growth was concentrated in rapidly growing developing countries, including China and India, where demand for food, in particular dairy and livestock products, is much more responsive to income growth than in developed countries.

a grain and soybean prices



While the above factors combined to increase market prices, some factors mitigated the price rises. In particular, a 20 per cent increase in area under corn in the United States, largely in response to a big increase in ethanol demand, resulted in an extremely large crop, limiting the price increase for corn.

The increased demand for corn for ethanol reflects both much higher prices for petroleum products and government measures to encourage biofuel production. In the United States a substantial part of that increase was made possible by lower areas under soybeans and cotton. In the European Union the adverse seasonal conditions that affected wheat similarly affected production of oilseeds, and additional quantities were used for production of biodiesel. These developments along with continuing growth in demand contributed to low stocks and increased world market prices.

sustainability of recent high world prices for major products

World market prices for agricultural products have displayed a long term downward trend in real terms, with periodic spikes such as in the mid-1970s and mid-1990s. It is noteworthy, however, that the rate of decline has slowed since the mid-1980s.

There are two main reasons why real world market prices have trended downward. One is that world production has risen faster than demand. The other is that protective policies in many countries have encouraged domestic production and depressed domestic consumption, reducing import demand, and thereby depressing international trade prices.

Whether real world market prices for agricultural products rise or fall over time depends on whether demand rises more or less rapidly than supply and on trade and domestic policy reforms that affect both export supplies and import demand. Factors that exert positive and negative influences on real world market prices are presented in the table below.

factors influencing world agricultural prices

	influence on world prices
continued income and population growth	▲
trade reform and reduced domestic subsidies	▲
government policies that encourage biofuel production	▲
higher input costs, especially for fuel and other inputs	▼
derived from petroleum, if world oil prices remain high	▲
substitution of farm land for urbanisation	▲
limitations on water supplies	▲
other environmental concerns and constraints	▲
advances in technology in agricultural production	▼
other improvements in agricultural productivity	▼

In the following sections, issues that have the potential to affect agricultural trade in the next few years are examined. These include government policies that encourage biofuel production using food crops as feedstocks; directions in agricultural protection and multilateral trade reforms; and issues such as food miles, genetic modification of organisms; and animal welfare. Broader, underlying factors affecting global supplies, demand and real prices in the longer term are presented in box 1.

biofuel programs

biofuel production placing upward pressure on grain prices

A major increase in demand for grains and oilseeds for producing biofuels is clearly contributing to the recent rise in world agricultural prices. The largest increases have been in the United States and the European Union, but there have been increases elsewhere. A major driver has been the three-fold increase in world petroleum prices (in nominal US dollar terms) since 2002. Extra protection, subsidies and incentives to encourage production and use of ethanol and biodiesel from domestic feedstock have also been important.

Probably the most important issue affecting the use of agricultural products for ethanol is the competitiveness of producing ethanol from various feedstocks, which depends on their conversion efficiency and the ratio of their prices to oil prices (Coyle 2007). If oil prices remain high relative to prices for the various feedstocks, demand for feedstock to produce ethanol will be high. Also, changes in prices between feedstocks, along with changes in technology, will influence the extent to which ethanol continues to be produced from current feedstocks, including grain and sugar, or alternatives. Currently 'second' generation technologies are being developed using cellulosic materials including specialised crops such as switch grass, crop stubbles, forest trimmings, industrial and domestic wastes and wood chips. Those technologies need further development but are reputed to have potential for far greater cost saving than present feedstocks.

biofuels can make only a small contribution to liquid fuel consumption

Biofuels produced from food crops can make only a relatively small contribution to world consumption of liquid fuels. The reason is that the volumes of those crops required for even a small proportion of the liquid fuel requirements of large consumers like the United States and the European Union constitute a much larger proportion of food crop supplies (Westcott 2007).

An argument that has been used to justify government support for domestic biofuels is to address concern about insecurity of liquid fuel supplies because of political instability in major supplying countries.

box 1 underlying factors affecting demand and supply for agricultural products

population growth

World population growth rates are declining but the world's population is still increasing by around 75 million or just over 1 per cent a year. There are disparate changes between developed and developing countries, with populations being static or declining in most developed countries and rising in developing countries. Most projections indicate world population increasing from its present 6.7 billion to more than 9 billion by 2050.

income growth and dietary changes

World income growth has been high over the past four years, with a substantial part of the growth arising from very rapid increases in the developing countries of Asia, especially China and India (IMF 2007, 2008)

Increases in income stimulate demand for food and fibres. However, the effects on demand depend substantially on the distribution of growth between developed and developing countries. There is little demand growth in developed countries where consumption levels are already high and populations are static or declining. However, the concentration of growth in developing countries, such as China, India and much of south east Asia, can greatly increase demand for food as diets become more varied, incorporating more meat, dairy products, vegetable oils and fruit and vegetables. In those countries, demand for starchy staples, including rice and wheat, declines as incomes rise. However, higher demand for live-stock products stimulates demand for cereals overall because of increasing requirements for grain for feed. Also, demand for oilseeds increases, both for direct human consumption of vegetable oils and for producing protein meals to help satisfy the rising demand for animal products.

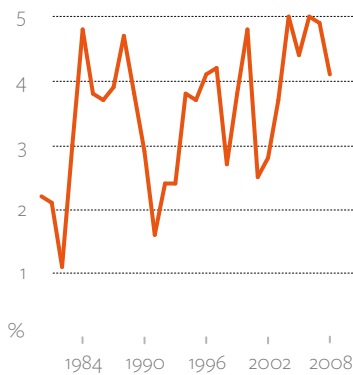
land constraints

The world total area of arable land, which includes areas planted to annual and permanent crops, increased by an estimated 9.6 per cent between 1961 and 1997. Since 1998, however, there has been a slight reduction, and by 2003 it was approximately the same as in 1992 (FAOSTAT 2007; NBS 2007). The main influences on the growth in world arable areas have been forest clearing in Africa, Asia and Latin America and urban encroachment into former agricultural land.

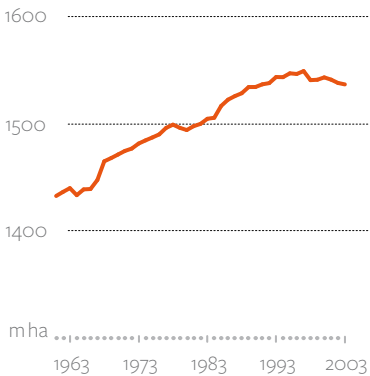
There are additional areas that could be brought under cultivation if market prices and profitability were high enough. However, most involve potential environmental costs. For example, the United States has a Conservation Reserve Program (CRP) under which some 15 million hectares of fragile land is set aside under medium term contracts. There are also areas of forests in many countries that might be cleared for cultivation.

continued...

real world gdp growth



world utilised arable and permanent crop area



box 1 underlying factors affecting demand and supply for agricultural products *continued*

other resource constraints

As well as limits to available arable land there are resource and input price issues that affect growth in world agricultural supplies. Prominent among these are prices and supply security for oil; the adequacy of fresh water supplies to meet rising demand from agriculture and competing uses; the consequences for the productivity of agricultural land arising from climate change; and environmental limits to the intensity of input use and animal waste use and disposal.

While each of these factors has its own special characteristics, there are overlapping and mutually enforcing features between them. Developments affecting the price of oil, an essential input for agricultural transport, fertilisers and chemicals, are of particular concern at present.

climate change and water

One of the concerns arising from accelerated climate change is the intensification of weather events, including droughts, severe storms and floods, which can markedly affect agricultural production.

The adequacy of water supplies to satisfy the requirements of agriculture and competing activities has become a major issue — for example, falling water tables are creating problems in India and there are stresses on supplies of water for irrigation in north China. In Australia, prolonged drought, coming on the heels of increased use of water for agricultural and other purposes, has precipitated major water management problems.

advances in technology

There is a history of technology development to overcome problems and increase outputs per unit of inputs used. Along with increasing volumes of inputs, improved technologies have kept agricultural production rising faster than demand.

The increasingly apparent constraints on many inputs mean that there will be a demand for more advanced technologies to sustain production growth. Some important areas include development of plant varieties better adapted to extremes of dryness, rainfall, heat and cold, resistance to pests, varieties suitable for double cropping, varieties and production techniques that can maintain or increase yields but with lower fertiliser and chemical use, further advances in identifying soil deficiencies and treating them, varieties that better utilise irrigation and irrigation techniques that increase output per unit of water and reduce costs of water distribution, continued improvement of livestock feed conversion rates through genetic improvements and improved feed rations, further advances in multiple animal births, resistance to disease and adaptability of animals to climatic conditions.

However, in many countries, long established sentiments for supporting farmers would also have contributed to the support of biofuels that has boosted demand for grain.

The environmental argument is that using biofuels instead of petroleum reduces greenhouse gas emissions. However, Coyle (2007) indicates that the gains from energy outputs exceeding energy inputs are small for ethanol from grain. At an individual feedstock level, they are greater for biodiesel from soybeans and ethanol from sugar cane. Where inputs for producing ethanol from grain use processes requiring fossil fuels, as for production of farm machinery, fertilisers and chemicals and for transporting outputs and inputs, the environmental benefits are small.

biofuel production also depends on movements in world oil prices

As briefly discussed above, the profitability of investments in biofuel depends, in large part, on the ratio of feedstock to oil prices. Von Braun (2007) indicates that when oil prices are between US\$60 and US\$70 per barrel, biofuels become competitive with petroleum in many countries. However, he also observes that competitiveness depends also on the prices for feedstock. Those feedstock prices are in turn determined through competition for supplies with traditional food and feed uses. Of the current main feedstocks, sugar cane has been the most efficient, with grain being less efficient. The cost of sugar cane feedstock for ethanol in Brazil represented 37 per cent of the value of the ethanol in 2003-04, while in the same year the cost of feedstock for US corn based ethanol represented up to 50 per cent of the value (Coyle 2007).

An additional factor affecting the profitability of ethanol from grain is returns from 'distillers grain', a residual byproduct. This is a high protein feed, supplies of which would help overcome potential depletion of feed grain supplies driven by demand for grain for ethanol. Nevertheless, the product is only a partial substitute for grain because of the extraction of starch in the ethanol process. While distillers grain has been widely used for cattle feeds its qualities have limited its use in rations for poultry and some categories of pigs.

international government support for biofuel production

There are government measures encouraging production and use of biofuels in many countries, including the United States, the European Union, Brazil, Canada, China, India, Indonesia, Malaysia, Thailand and Indonesia. All have instituted blending targets or plans for fuel generally or for various categories of vehicles.

support in the united states for biofuels encourages corn production

In the United States, biofuel production is supported through a combination of an ad valorem import tariff of 2.5 per cent in conjunction with a US\$0.54 a gallon (US14.3 cents a litre) specific duty on ethanol, giving an overall tariff equivalent at recent values of around 25 per cent (Coyle 2007). It also provides a US\$0.51 a gallon (US13.5 cents a litre) tax refund for blenders of ethanol and US\$1.00 a gallon (US26.4 cents a litre) for biodiesel. Some states also provide support, largely through lower taxes for biofuels than for petroleum fuels.

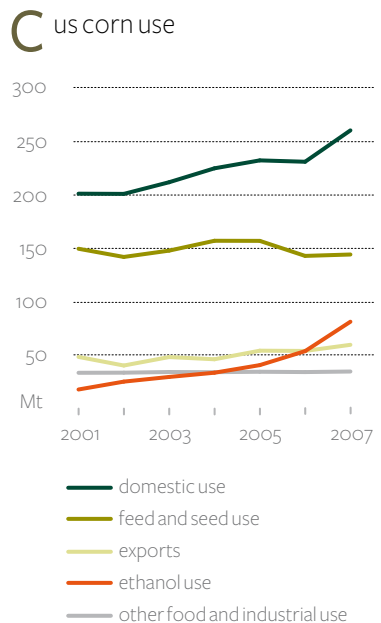
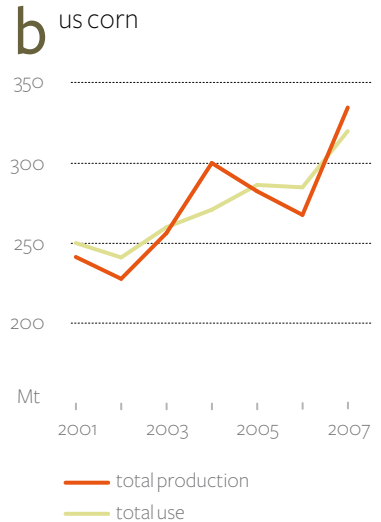
With the recent increases in oil prices and the incentives for biofuels, there has been a major increase in US production of both corn and ethanol. In 2003, US production of corn was 256 million tonnes, of which 29.6 million tonnes or around 12 per cent was used for ethanol. In subsequent years, up to 2006, production varied between 300 million tonnes in 2004 and 268 million tonnes in 2006. In 2007, production increased sharply to 334 million tonnes, arising from a 22 per cent increase in area harvested and increased yields (figure b).

Much of the increase can be attributed to rising demand for ethanol for which there has been a major expansion in production capacity that is ongoing (Schoonover and Muller 2006). The total use for ethanol increased in 2007 to 81 million tonnes or 24 per cent of total corn production. That is approximately twice Australia's total production of wheat and feed grains in a good year.

In 2007, US use of corn for ethanol exceeded exports for the first time (figure c). The large increase in US corn area in 2007 resulted from substitution of cropland away from soybeans and cotton, with no increase in overall areas under major crops. Considering that the US ranks with Brazil as the world's largest soybean exporter and is the largest exporter of cotton, land diversion from these crops will mean that the additional agricultural demand from biofuels will spill over into higher prices for those other crops. Westcott (2007) forecasts that US corn areas will remain substantially higher and soybean areas will be lower than previously.

further support in the new energy bill in the united states

In December 2007, the US Government enacted an Energy Independence and Security Act requiring fuel producers to use at least 36 billion US gallons of renewable fuels in 2022, with all the increase from 2016 being from cellulose and feedstocks other than corn starch. The total represents an almost fivefold increase over current levels (The White House 2007). Within the total there is a 15 billion gallon target for ethanol from corn. That represents an increase of approximately 70 per cent from present production.



However, if technologies for ethanol from cellulose do not fulfil expectations, the subsequent use of corn could be greater. Currently, US corn constitutes about 30 per cent of total world production of coarse grains and 19 per cent of coarse grains plus wheat production. The biofuel targets and how they are met will have major implications for world supplies, exports and prices of cereals for food and feed.

biofuel support in the european union

The European Union has pursued an area reduction program for arable crops (cereals, oilseeds and protein crops), which in recent years has been set at 10 per cent, but has provisions under which set-aside land can be used for industrial crops, which includes crops for biofuels. In addition, EU farmers are paid an energy subsidy of 45 euros per hectare. The EU tariff on ethanol is 19.2 euros per 100 litres which, according to Steenblik (2007) was equivalent to an ad valorem rate of 52 per cent in January 2007.

biofuel developments will affect production and use of both cereals and oilseeds in the european union

EU projections are for continuing rises in production of both cereals and oilseeds. They also foreshadow some increase in net exports of cereals. EU consumption of cereals is projected to increase by 28 million tonnes or 11 per cent between 2006 and 2014, with 16 million tonnes of this increase for bioenergy. EU consumption of oilseeds is projected to rise by 23 million tonnes or 53 per cent, with approximately half of the increase for bioenergy. About two-thirds of the increase in total consumption would be from higher domestic production (European Commission 2007).

potential impacts on livestock production

The higher prices for feed grains and oilseeds arising from biofuel expansion will be reflected in higher costs for stock feeds that incorporate large components of these ingredients. In turn, those higher costs will be reflected in higher prices for livestock products, but with time lags depending on current stock numbers and the time taken for producers to adjust to changing input-output price relationships.

Typically, the proportion of dry distillers grains that can be added to animal diets have been approximately 20 per cent for beef and dairy, 10 per cent for pigs and 5 per cent for poultry (Lemanager et al. 2007). The most direct flow through of grain and oilseed prices to animal product prices might be expected for poultry meat, for which feed constitutes a large proportion of total costs, for which animal numbers can adjust relatively quickly, and for which distillers grains can be incorporated into feed rations to only a minor degree.

Distillers grains have so far been used most heavily in cattle feed and their increasing availability in the United States might be expected to restrain the flow through from higher grain and oilseed meal prices to higher prices for beef in that country, with effects internationally through US import and export prices.

government support and protective policies on agriculture

Agricultural protection is widespread around the world. Levels are particularly high in the developed countries of western Europe, Japan and, for some commodities, the United States. They are also high in many developing countries. Protection is mainly to support farmers' incomes. However, there are also other reasons, including food security, regional development and, in many developing countries, raising customs revenue.

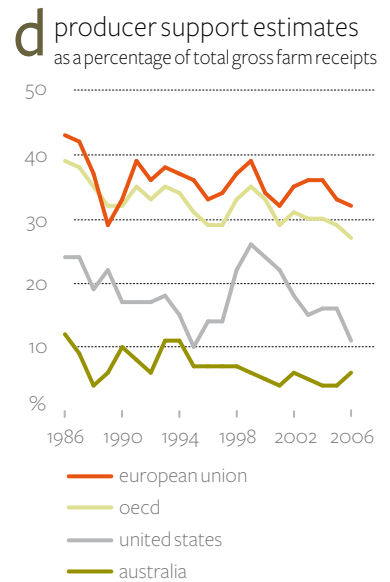
Although levels of support in mainly developed countries of the OECD have declined from their extreme levels in the mid-1980s, they have fluctuated around relatively constant, but still high, levels since 1991 (figure d; OECD 2007a,b).

Support levels are not a good indicator of policy induced market distortions, as different forms of support have different market effects. In particular, commodity specific measures supporting internal prices above world levels have marked effects through increasing production, reducing domestic consumption and depressing world prices.

changing forms of farm support in western europe and the united states

Price support has been the main means of providing agricultural support. However, since 1992 there have been significant changes in support methods in western Europe and the United States. Those countries are trying to make support less market distorting by breaking or weakening the links between support and current production and prices through what is termed 'decoupling'. In the European Union, internal support prices have been markedly reduced for an array of agricultural products, with producers being compensated through ongoing annual direct payments. Since 2005, those payments have been aggregated per farm or per unit of area under a 'single payments scheme' (SPS), which is effectively a subsidy to farmers for farming.

In the United States, support for farm program crops — wheat, feed grains, oilseeds, rice and cotton — is still provided through payments on historical commodity specific area and yield bases. However, farmers are free to plant most crops, including crops other than those for which they have bases.



They cannot receive program benefits if they produce fruit, vegetables or wild rice on base areas.

The move toward more decoupled payments reduces the extent to which support depresses world prices. This applies particularly where internal support prices are markedly reduced, thereby reducing their depressing effect on domestic consumption. However, there are many reasons why ongoing support in its modified form will still encourage production and depress world prices.

One is that governments have a propensity to update payment bases, giving farmers an incentive to expand production. This occurred with the 2002 US farm bill. Another is that while some governments, such as those in the European Union, are changing their forms of domestic support they are retaining high levels of other forms of support, including import tariffs.

Also the European Union has exempted particular support for some commodities for some members from the single payment scheme in cases where they were concerned that inclusion would markedly reduce regional production. That is, they allowed exclusions in cases where the decoupling was likely to be most effective in reducing market distortions.

Another is that a change to farm level support rather than individual commodity support means that farmers have little incentive to change from production levels and patterns established through commodity linked support. Importantly, the ongoing support maintains agricultural land values previously inflated by commodity specific support, sustaining the competitiveness of farming land with urban, recreational and infrastructure activities.

The changes in support by developed countries since 1991 indicate a preparedness to change methods of support but not levels. Also, there are political obstacles to instituting properly decoupled support. Consequently the decoupling of policies implemented so far has been only partial and many claims about minimal market distortions from decoupling are overstated (Roberts and Gunning-Trant 2007). Nevertheless, it has contributed, along with reforms elsewhere and constraints on land, environmental quality and water, to slowing the rate of decline in real world market prices.

importance of farm policies reform

Some may argue that with higher world prices (that have been influenced by the use of grains and oilseeds for biofuels), the problems of depressed prices on world markets arising from government policies have declined, at least in the short to medium term. However, very substantial barriers to trade remain in many agricultural commodities and although some countries may have adequate access for some products to particular markets,

many often do not. Also, production is being subsidised in countries that would be less competitive than others where farmers receive little support.

The arguments about the benefits from trade liberalisation are as valid now as ever. Abare estimates indicate that, by 2025, complete removal of all tariffs in merchandise trade, including agricultural products, would increase world exports of merchandise by US\$1324 billion (in 2006 dollars). Of this US\$280 billion would be in additional agricultural exports. The estimates also indicate global production increases for both agricultural and non-agricultural products, the respective gains being US\$178 billion and US\$57 billion. The increases in production reflect improved resource allocation from eliminating tariffs.

state of play in the doha round

The Doha Round of negotiations under the auspices of the World Trade Organisation began in 2001 and are continuing. So far they have taken almost as long as it took to reach agreement in the Uruguay Round. The history of multilateral trade negotiations has been one of progressive increases in time to reach agreement (Goode 2002; WTO 1998). This is understandable because WTO membership is increasing, there is a wider range of issues being negotiated and these issues are becoming more complex and less tractable. Agriculture is an area where there are substantial impediments to achieving trade liberalisation and reductions in distorting subsidies. But there are also other difficult areas. Currently problems are being experienced in reaching agreement for non agricultural market access (NAMA) as well.

While there are factors of complexity and reaching agreement between more members that complicate reaching agreement in the Doha Round, there are also factors that should help facilitate negotiations. For agriculture, a comprehensive framework for addressing the many forms of support and protection is a legacy from the Uruguay Round. Under that framework, negotiations were split into three pillars — market access, domestic support and export measures. This approach has been adopted for the Doha Round.

negotiations on tariff reductions

In the round so far, there has been relatively good progress made on the export competition and domestic support pillars. However, there continue to be wide differences between members and groups of countries that have formed negotiating blocs on market access, particularly on flexibilities from the full tariff reduction formula in the form of so-called 'sensitive products'.

The WTO is a consensus body rather than one depending on formal voting. Where there are differences in reaching agreement, the approach has been to allow special concessions to members and groups for which liberalisation or the cutting of subsidies is likely to be politically or socially difficult. For

example, for agriculture in the Uruguay Round, cuts to tariffs by developing countries were only two-thirds of those for developed countries — the same approach is being used for the Doha Round.

A fundamental issue determining the effectiveness of tariff cuts is that agreed tariff cuts are from bound rates, which are maximums that members undertake not to exceed, not from actual applied duty rates. In many instances, applied tariff rates are well below bound rates, the difference representing ‘water’ in the bound tariff. So even large reductions in bound rates may have no, or little, effect on applied rates (Podbury and Roberts 2003; Huan-Niemi 2007).

In the Doha Round it has been broadly agreed that there should be a progressive scale for reducing agricultural tariffs, higher tariffs being reduced by more than lower ones. This, plus a growing appreciation of the water in bound tariffs has contributed to countries proposing marked cuts to bound tariffs.

special concessions for market access

For market access in the Uruguay Round, special concessions were applied for developing countries through ‘special and differential’ (S&D) treatment. These involved smaller cuts than for developed countries, phased in over a longer period. Also, for specified products for which nontariff barriers were ‘tariffed’ (converted to tariff equivalents), special safeguards were provided, allowing temporary increases in tariffs for particular countries when there were abnormal increases in import volumes or abnormal reductions in market prices. These special safeguards have been applied mainly by developed countries.

In the Doha Round, additional avenues are being considered for special concessions from the general provisions for market access. These include the designation of ‘special products’ for developing countries and ‘sensitive products’ for both developed and developing countries, and a special safeguard mechanism especially for developing countries. For both special and sensitive products, the tariff cuts would be lower than those agreed generally. Special products for developing countries are those considered important for food security, livelihood security needs and rural development. Sensitive products are politically sensitive products, and while they would be allowed lower tariff cuts than those generally applied, they would be subject to larger tariff quota access than otherwise.

The special concessions approach can help members reach agreement. However, care is needed to ensure that special conditions allowed for various members and groups do not water down the trade liberalisation and other benefits from the agreement too much. This is particularly the case where the concessions could actually increase protection. It was concluded

by Anderson and Martin (2005) that 'exempting even just a few Sensitive and Special Products is undesirable as it would reduce hugely the gains from reform and would tend to divert resources into, instead of away from enterprises in which countries have their least comparative advantage'.

differences appear less on domestic farm support

On domestic support, differences between parties appear less than for market access. In the Framework Agreement in July 2004, it was agreed that government payments for which no production is required would be considered exempt from inclusion in a member's 'aggregate measurement of support' (AMS) that is subject to agreed reductions. Such payments were to be included under the 'blue box' that, from the Uruguay Round, applies to support under production limiting arrangements and would not be subject to agreed cuts. However, there would be a cap on total support considered to be market distorting that would include support in the AMS, support classified as de minimis, where each of commodity specific and non commodity specific distorting support was less than agreed levels, and blue box support.

On export measures, an agreement was reached at the 2005 Hong Kong WTO ministerial meeting to eliminate export subsidies by the end of 2013. Disciplines on food aid to prevent commercial displacement by surplus disposal in the guise of food aid are being negotiated, as are provisions to tighten export financing. Export state trading enterprises are also being targeted, with the possibility of export monopolies being addressed directly in a Doha deal.

the new us farm bill in 2008

Every five to seven years, the US Government introduces new farm bill legislation, setting guidelines and directives for policies. Currently a new bill that will apply until 2012 is in its latter stages of development.

Key elements of the prospective bill include support settings for farm program crops (which include wheat, feed grains, rice, cotton and oilseeds) and support levels and arrangements for dairy and sugar. These commodities have accounted for less than 40 per cent of the value of US agricultural production. Support for other major agricultural industries, primarily meats and horticulture, is much lower. The bill also covers measures for a wide range of policy areas, prominent among which are environment and trade policy.

The 2008 farm bill will largely maintain the structures of support in the 2002 farm bill for farm program crops. Those involved a range of measures including:

- **assurance of minimum unit returns** on current production at an effective price, termed the loan rate, that is administratively set — when

market prices fall below the loan rate, the difference is made up through payments termed loan deficiency payments or marketing loans

- **provision of direct payments for income support** at fixed unit rates, such payments being made on fixed historical area and yield base levels
- **provision of variable income support** through countercyclical payments that vary inversely with market prices — such payments cover the difference between administratively set target prices and the sum of the loan rate or the market price, whichever is the higher, and unit direct payments; payments are made on fixed historical area and yield bases.

some increases in target prices

There are currently indications that there will be some increases in target prices, especially for wheat, barley and soybeans, in the new bill but no changes in unit direct payment rates.

Perhaps the largest likely change in the new bill is an option for producers to receive revenue assurance payments for farm program crops when average revenue falls below levels determined from past and expected market prices. Where farmers elect to receive revenue assurance payments they would not be eligible to receive marketing loans or countercyclical payments and would accept reduced direct payments. The scheme is designed to provide a safety net for returns not only when prices are low but also when yields are low.

changes to support for dairy products

Expected changes to dairy support constitute an element of the bill that could be controversial in the WTO context. In the past, US price support for dairy under the farm bill has been through setting a minimum price for milk. In the 2002 farm bill that price was US\$9.90 per 100 pounds. In the new bill this has been replaced by price support for cheese, butter and nonfat dry milk.

In its Uruguay Round commitments and notifications to the WTO, the US Government has, until now, determined price support for its AMS for milk as the difference between the administered support price for milk and a fixed external reference price for the base period 1986–88, multiplied by the quantity supported (total US milk production).

By changing to support prices for specific dairy products that use only a part of total US milk production, the US Government would be excluding the extent of support for fluid milk and for dairy products other than butter, cheese and nonfat dry milk — support previously incorporated in the US base level for its permitted AMS. The uses that would be excluded account for almost half of total US milk production.

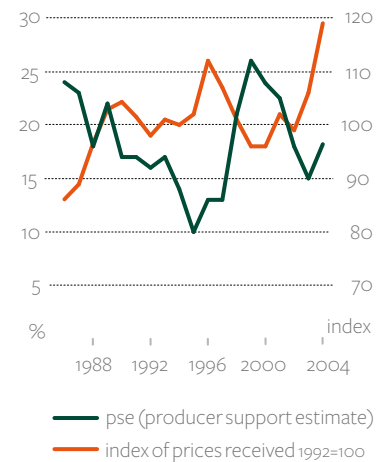
Other WTO members will no doubt take a keen interest in how the United States notifies its support for dairy in future and any inconsistency between current reported support and that incorporated in the US commitments for its AMS.

overall support could be lower as agricultural prices have been higher

Support for US agriculture has been highly countercyclical with market prices, as is evident from ‘producer support estimates’ (PSEs) published by the OECD (figure e; ERS 2007; OECD 2007b). This is as expected, given that loan deficiency payments, marketing loans and countercyclical payments move inversely with prices.

It seems likely that support from provisions of the new farm bill will be lower than under the 2002 bill. This is because of the expected buoyant prices for farm program crops for several years stemming from growth in demand for corn for biofuel and the knock-on effects on supplies for other crops that compete for land with corn. That does not necessarily mean that actual support for US agriculture will have declined, as there will have been substantial indirect assistance through government support for biofuels.

e us support levels for agriculture and prices received by farmers



community perceptions affecting trade

Perceptions about health and environmental effects and animal welfare issues can potentially affect farm trade through consumers’ choices and effects on government regulations and controls. Three related specific issues are the concept of ‘food miles’, regulations on production, use and imports of genetically modified (GM) crops, and animal welfare.

food miles can be misused as a protection measure

The idea behind ‘food miles’ is to encourage people to consume food produced locally on the grounds that its transport involves lesser greenhouse gas emissions than food produced further away. It is a partial concept that takes account of only one of the many activities in producing and delivering food to final consumers. The critical environmental issue is not only emissions in transport, but total emissions from all stages in producing and transporting food.

In some countries, particularly in Europe, advertising and media comment on food miles is potentially harmful to imports that are more competitively produced elsewhere. It is of particular concern to distant suppliers like Australia and New Zealand. It may be noted that agricultural production in Europe or Japan, for example, is highly energy intensive, using much heavier applications of fertilisers and chemicals than in New Zealand or Australia. A New Zealand study (Saunders, Barber and Taylor 2006) indicated that a

range of meat, dairy products and fruit and vegetables from New Zealand sold in the United Kingdom resulted in lower greenhouse gas emissions overall than comparable products produced domestically, even though emissions in their transport were greater.

The concept of food miles is an example of an issue of striking a balance between environmental considerations and achieving the benefits from comparative advantage and trade. An efficient and effective policy to address greenhouse gas emissions issue would be to develop a scheme such as emissions trading so that the cost of emissions associated with production, processing, transport and marketing are fully incorporated in suppliers' costs. Under such circumstances, the environmental costs associated with greenhouse gas emissions would be fully included in costs and prices and issues such as food miles could be made irrelevant.

stringent import regulations on gm crops

GM crops offer considerable potential to meet increasing demand for agricultural products, to overcome climatic constraints, to increase production efficiency and to increase the nutritive qualities of foods. However, with community concerns about health effects, biodiversity and the potential of these crops to contaminate other crops, especially where their characteristics make contamination difficult to control, some countries are cautious about production of and trade in GM products.

consumer concern on animal welfare

Animal welfare issues are being reflected in both consumer preferences and government regulations by some countries for treatment and transport of animals.

concerns about 'process protection'

Process protection— that is, the way in which commodities or services are produced — reflect community concerns. However, they can also be used, or misused, to provide 'process protection' for local industries by discouraging imports, thereby reducing benefits from trade. Such protection can arise through media enforcement of consumer prejudices and through government regulations insisting that outside suppliers meet domestic standards designed for production systems that can differ greatly from their own.

On GM foods, there is a tradeoff between the potential benefits and risks of its acceptance. Realisation of the benefits requires public confidence in responsible regulatory bodies to ensure that the risks can be minimised and the benefits can be obtained in as timely a fashion as possible. In turn, that requires the setting and strict and efficient application of scientific standards, regulatory standards, testing procedures and labelling rules.

conclusions

The world agricultural market appears to have entered a period of higher real prices for grains and oilseeds than has applied for more than a decade. The increases have spread to encompass a wide range of crops and will in time result in knock-on increases for livestock products because of higher feed costs.

It appears that world market prices for major grains and oilseeds could remain at higher real levels than previously for several years at least, as government energy policies are mandating substantial increases in targets for biofuels in some countries. To meet those targets it will require substantially increasing quantities of grains and oilseeds. This additional demand, along with rising demand for food and stockfeed in rapidly growing developing countries and constraints on land, water and other key inputs, appears likely to maintain buoyant market conditions.

The recent boost to agricultural prices arising from the demand for biofuels and the expectation that higher prices will be sustained for several years in no way diminishes the need to pursue gains from trade through making markets more open and production, consumption and trade less distorted by government support and regulations. The higher prices could moderate resistance to reductions in protection and calls for special treatment in the Doha Round, facilitating agreement.

Open markets that are distorted as little as possible by subsidies and protective regulations are central to attaining gains from specialisation and trade and for the realisation of the economic potential of nations. That applies as much for market distortions through subsidies for biofuels as it does for direct support and protection for agricultural and other products.

While community concerns about fuel security and the environment are now acting to stimulate demand and world prices for agricultural products, there is a range of other issues that have the potential to be used to discriminate against competitive imports thereby restricting the benefits from trade. Such a potential exists from the development and publicity of the concept of food miles, through regulations for imports of genetically modified crops and through rules on animal welfare.

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