



The Impact of Trade Agreements on Livestock Producers

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Abstract

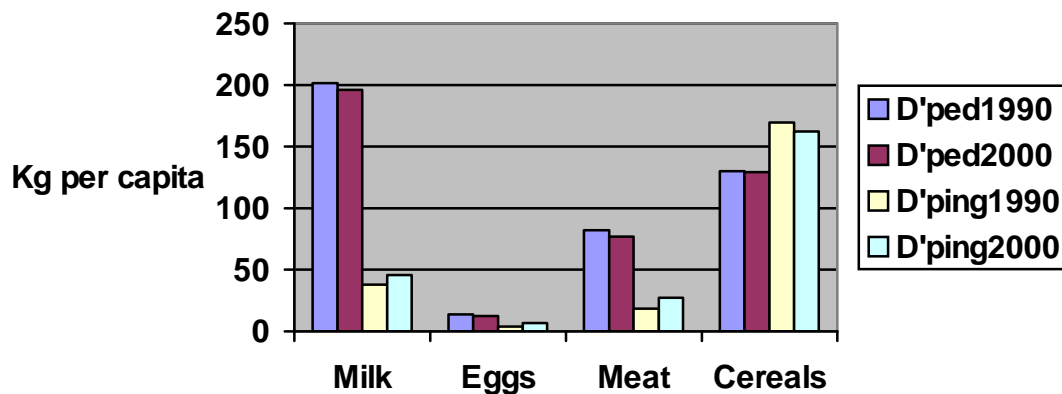
Growth in per capita supply of livestock products in developing countries during the last decade is associated with even faster growth of imports, particularly those of pig and poultry meat. Some developing countries are net exporters of livestock products. The theory of comparative advantage emphasises the global benefits of trade liberalisation and the damage caused by tariffs and other trade barriers. High tariffs remain in the EU, USA and Japan despite the negotiations of the WTO aimed at reducing trade barriers. However, it is estimated that even if all such barriers were removed, the impact on developing countries, as a group, would be relatively small. The SPS Agreement of the WTO is aimed at international harmonisation of health and sanitary standards and the resolution of associated trade disputes. Developing countries face resource constraints in meeting the standards demanded by industrialised country importers. Similarly standards for environmental protection, animal welfare and other non-market attributes of agricultural products may require harmonisation within the WTO.

1. Consumption of Livestock Products and Trade in the Developing Countries

Demand Growth

The rapid growth of global demand for livestock products, which has occurred over the last quarter century, has been characterised as “the Livestock Revolution” (Delgado et al 1999 & 2001). It is largely driven by increases in per capita incomes, population growth and urbanisation of the developing countries. (Further notes on the classification of countries, as “developed” or “developing” are given in Appendix 1). As Figure 1 shows, while consumption per capita of livestock products has fallen slightly in the developed countries over the last decade, substantial growth has occurred in the developing countries. Despite this growth, average consumption levels remain much higher in the former group of countries. In developing countries average per capita consumption of milk, eggs and meat has grown by 2 percent, 4 percent and 6 percent respectively per year. It is noteworthy that average per capita consumption of cereals has fallen slightly in both groups of countries. About 20% of total cereal consumption in the developing countries is as animal feed. This proportion has grown along with the expansion in intensive livestock production.

Figure 1: Per capita annual supply of livestock products 1990 & 2000.

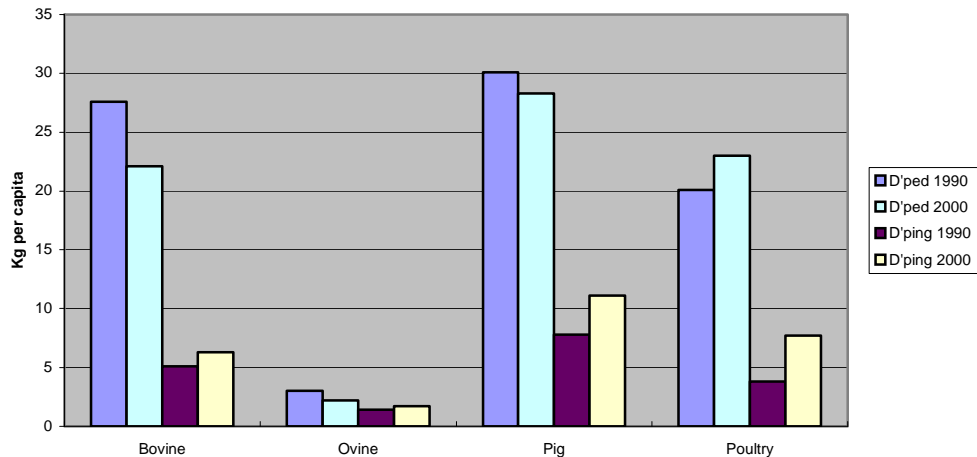


Source: FAOSTAT 2003

The contributions of different animal species to the average developed and developing country intake of meat and their growth are shown in Figure 2. In the developed countries the fastest decline has occurred in the consumption of bovine meat (beef and veal). Dietary intakes of ovine

meat (mutton, lamb and goat meat) and pig meat (pork and bacon) have also shrunk. None the less pig meat is still the largest component of meat consumption. In contrast to other meats, consumption of poultry meat has risen over the last decade.

Figure 2: Types of meat consumed annually per capita 1990 & 2000.



Source: FAOSTAT 2003

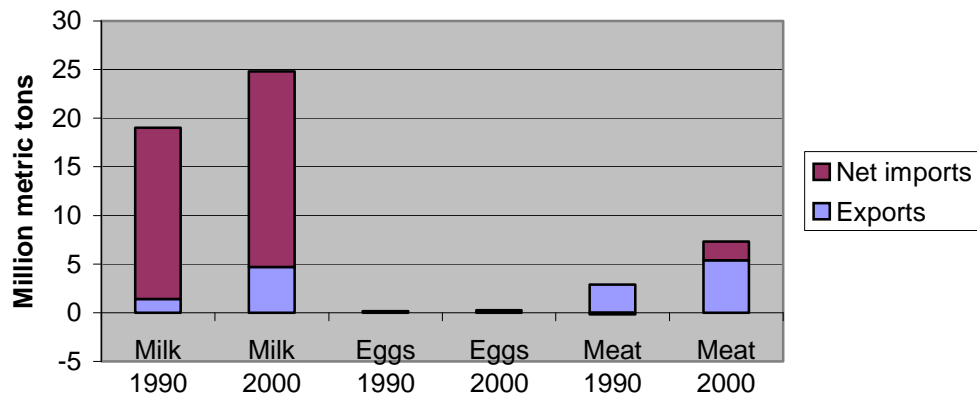
For the group of developing countries, consumption of meat from intensive livestock production systems has grown fastest. For instance the per capita intake of pig meat has increased by a half over the decade (by 4 percent annually) while that of poultry meat has more than doubled (over 7 percent annual growth) from 1989 to 1999. These so-called “landless production systems” are largely responsible for the rapid growth in average meat supply per person in the developing countries. The quantities of pig and poultry meat in the average diet of people in developing countries now exceed the quantity of bovine meat. It should be noted that the very high estimated growth rate and current level of pig-meat consumption in China have a major influence on the average for all developing countries and doubts have been raised regarding their reliability (Bruinsma, 2003).

Growth of Imports of Livestock Products to the Developing Countries

Whilst this growth in average nutritional intakes of animal products in developing countries is encouraging, it is, in large part, due to increased imports of these products from the developed countries. The growth of imports is illustrated in Figure 3. In this Figure the total height of each column represents the gross imports, these being the sum of exports and net imports. The total tonnage of cereals traded is too large to include on the same scale as the livestock products.

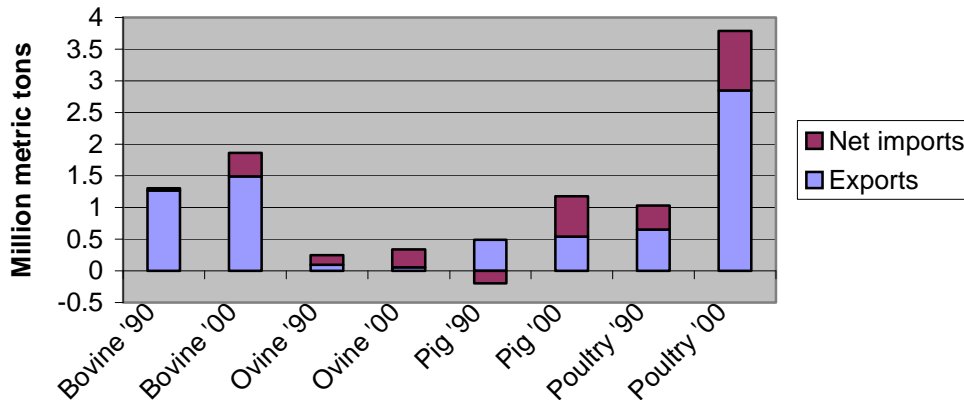
However, net imports have grown at about two and a quarter percent per year, and provide over a tenth of total cereal supply.

Figure 3: Imports of livestock products to developing countries 1990 & 2000.



Source: FAOSTAT 2003

Dairy products are by far the most important type of livestock product imported into developing countries, both quantitatively and in value terms. Dairy products make up 54 percent of the total dollar value of net imports of livestock and their products, or 71 percent if non-food items such as hides, skins and wool are excluded. Imports of dairy products have grown at 2.4 percent annually and in 2000 represented nearly 12 percent of total supply of these products in the developing countries. Net imports of eggs have declined and represent a very small fraction of total supplies. Imports of meat have grown by two and a half times over the decade (nearly 10 percent annually) and in 1999 represented over 5 percent of total supply of meat. However there are large differences in import levels and growth between different types of meat (see Figure 4).

Figure 4: Imports of different types of meat to developing countries 1990 & 2000

Source: FAOSTAT 2003

While trade between developed and developing countries in ovine meat has stagnated over the last decade, imports of bovine, pig and poultry meat to the developing countries have grown rapidly. For bovine meat, the developing countries were initially net exporters to the developed countries. Subsequently, imports of bovine meat have increased by nearly 50 percent and now account for 6 percent of total supply on developing country markets. Imports of pig meat have tripled (nearly 12 percent growth annually) but still contribute only 2 percent of supply. Imports of poultry meat have increased by four and a half times (by nearly 16 percent annually), make up 13.5 percent of total supply and exceed imports of all other types of meat put together.

Wool and hides and skins account for 7 percent and 17 percent respectively of the total value of net imports of livestock and livestock products to developing countries. Live animals account for about seven percent by value of net imports of livestock and their products, small ruminants (sheep and goats), pigs and poultry each accounting for about one percent while bovine animals, mostly cattle, make up 4 percent of the total.

Summary and Discussion of the Changing Trade in Livestock Products

From this analysis of the FAO statistics several conclusions may be drawn:

- Starting from relatively low base levels of average per capita consumption of livestock products, rapid increases are occurring in the developing countries.
- The fastest increases are occurring in the consumption of pig and poultry meat.
- Growth in domestic production has been insufficient to keep pace with the growth in consumer demand, so imports of all livestock products, pig and poultry meat in particular,

have increased. Today the group of developing countries is a net importer from the developed countries; imports exceed exports.

These findings should be placed in the broader context of rapidly increasing international trade in all commodities, of which agricultural products represent a small proportion by value. Of the total trade in agricultural products, the value of livestock products represents only about 17 percent. Besides, more than three quarters of world trade in livestock and their products occurs between the developed countries.

Within the broad group of developing countries, there are big differences between individual countries with respect to the per capita consumption of livestock products and the patterns of trade. Agro-ecological, cultural and economic differences exist between African, Asian and Latin American countries. Most African countries and many countries in Asia fall into the category of 'Low Income Countries'. These countries, as a group, are net exporters of ruminant meat, hides and skins and live sheep and goats, despite being net importers of livestock products in total and of dairy products and pig and poultry meat in particular. Some of the "Least Developed Countries" of the African Sahel and South East Asia are net exporters of live cattle, sheep and goats. Most states in Latin America, though categorised as 'developing' are in the 'Middle Income' category. Argentina, Uruguay, Mexico & Brazil are net exporters of livestock products.

Patterns of trade have evolved, and are still evolving, as a result of market forces in response to differences between countries in the relative costs of production of alternative commodities and consumer preferences. Income and population growth have led to rapid increases in developing country demand which could not fully be matched by domestic supply. Barriers to free trade have resulted from government policies, including agricultural subsidies and protection in developed countries as well as taxation and industrial protection in developing countries. Trade agreements are aimed at co-ordinating the imposition or reduction of trade barriers between countries. An understanding of the relative impacts of market forces and government policies is needed for the design of appropriate policies for livestock development (see Upton 2001).

2. Comparative Advantage and the Benefits of Free Trade

Theoretical Benefits of Trade

Trade in livestock and livestock products, like trade in other commodities, occurs, as a response to international differences in the product price. A country gains by exporting if the price for exported produce is higher than the domestic price, which would prevail in the absence of trade. Conversely imports are beneficial if it is cheaper to import the meat than to produce it domestically. Thus differences between countries in the costs of production, resulting from

differences in technology and in resource endowments, provide incentives for trade to occur. The theory of 'Comparative Advantage' demonstrates that all countries, both rich and poor, can benefit from greater specialisation in the products for which they have a comparative advantage. Free trade in international markets is therefore predicted to lead to a welfare optimising distribution of production and consumption between countries, with all commodities produced at minimum cost (where costs include those of transactions and transport).

Other advantages are claimed to result from trade liberalisation. Increased trade is expected not only to increase incomes and consumer choice but also to reduce unemployment and promote economic growth. International capital mobility may reduce the impact of differences in the capital resource base. A further presumed benefit of free trade is the spread of new technology from country to country. In countries shielded from foreign competition by trade barriers, traditional technology and methods of production are likely to hold sway. Under free trade, however, competition with foreign producers requires the domestic producers to stay abreast of the latest technologies. Furthermore, the general contacts made through trade contribute to the diffusion of modern technologies from the developed to the less developed countries.

Against these presumed benefits, critics of free trade argue that developing countries become less self sufficient and more dependent on other countries. The argument that countries dependent on primary sector exports are likely to suffer from deteriorating terms of trade, or falling relative export prices, is hardly relevant since developing countries are now net food importers and demand for livestock products is much more income elastic than demand for other foods. A further criticism is that trade becomes increasingly concentrated in the hands of transnational corporations (TNCs). It should be recognised, however, that the TNCs are the main delivery route for both capital (foreign direct investment) and new technology to developing countries. These inputs can serve as catalysts for economic development. To benefit from them developing countries need to adapt technologies to domestic use, provide competitive policy environments and design contracts that allow small scale producers to thrive within the operations of TNCs, which is not easy to achieve. While intensive livestock keeping, pigs, broilers and some dairy enterprises may be integrated with processing and marketing plants, there are major problems in integrating traditional producers with large organisations. None the less the general view among economists is that all countries benefit, in the long run, from trade liberalisation (Bruinsma 2003, Chap.10; World Bank 2001).

Comparative Advantage and Product Choice

Differences in comparative advantage between countries depend upon (a) the available resources of land, labour and capital and (b) the available technology. The two are closely related both because capital resources are intimately involved in the development and

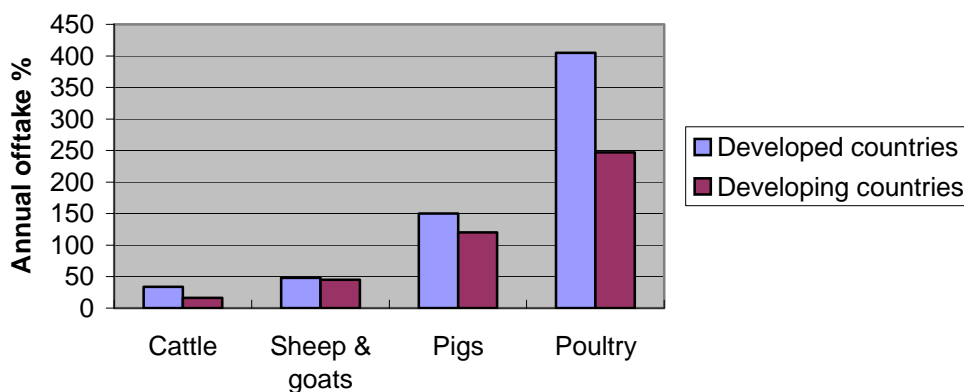
implementation of new technology and because relative factor scarcity influences, and induces changes in, the prevailing technology.

The resource base is influential in that developing countries with plentiful land and labour resources, like much of Africa and Latin America, but with limited capital, have a comparative advantage in the production of land-using and labour intensive agricultural products. The fact that the Low Income and Least Developed Countries of the African Sahel export live ruminants, whilst importing other livestock and livestock products, probably reflects their comparative advantage in grazing livestock on the extensive semi-arid rangelands of that sub-region. Latin American countries such as Argentina and Uruguay are long-established beef exporters.

However, global demand for intensively produced poultry meat, and for pig-meat in some countries, is growing faster than the demand for ruminant meat. A contributory factor is the relatively low price of these meats resulting, in part, from the greater productivity of these species. Comparative productivity of the different livestock species, derived from FAO statistics, are presented in Figure 5. Production is measured by the number of animals/birds slaughtered in 2000 plus the increase, or minus the decrease, in animal/bird population between 2000 and 2001. Productivity is then estimated by number slaughtered as a percentage of the population recorded in 2000. This simple comparison serves to emphasise the greater reproduction rates of the 'landless' livestock species.

While these livestock enterprises require little land, intensive production and processing necessitate increased capital inputs and more sophisticated technology than production of grazing ruminants. This may shift the trade advantage to the developed countries, where these resources are more readily available and productivity is considerably higher. The higher productivity in developed countries is illustrated in Figure 5. The U.S.A., which has the necessary capital and technology, now dominates the global export trade in poultry meat.

Figure 5: Relative productivity of different livestock species 2000-2001



Source: FAOSTAT 2003

Similarly intensive milk production and processing generally yields higher returns than beef production, but requires more capital and higher levels of technology. The apparent comparative advantage of the developed countries in the production and export of dairy products is due to the greater availability of capital and the availability of modern dairy technology. It is noteworthy, however, that India is now the world's largest producer of milk.

A force contrary to the above, determining trade patterns for livestock products, relates to the relative transport costs of feed-grains and livestock products. Feed grains are less perishable and cheaper to transport per ton than livestock products. Given the high feed conversion rates of grain-fed pigs and poultry, 1:3 or better, it should be economically advantageous for developing countries to produce these livestock products domestically and import the feed grain if necessary. Thus there is a natural incentive to substitute feed imports for imports of livestock products. It is a noteworthy achievement for developing countries, such as Brazil and Thailand to have become key exporters of poultry meat. China is a major exporter of pig meat.

3. Trade Agreements

Trade Barriers

Import tariffs, and other forms of protection, are used to support domestic producers. These barriers to trade have often been used to promote industrial development as part of an inward-looking, import-substitution strategy for development. The aim may be support of infant industries, to raise public finance, employment creation or income redistribution towards the poorer sectors of society which supply resources to the protected industry. However, just as trade liberalisation raises social welfare for participating countries, barriers to trade must reduce social welfare. An import tariff yields revenue to the Government and raises the price received by domestic producers but consumers suffer from the price increase. In general the welfare loss to consumers exceeds the gains for producers and the Government.

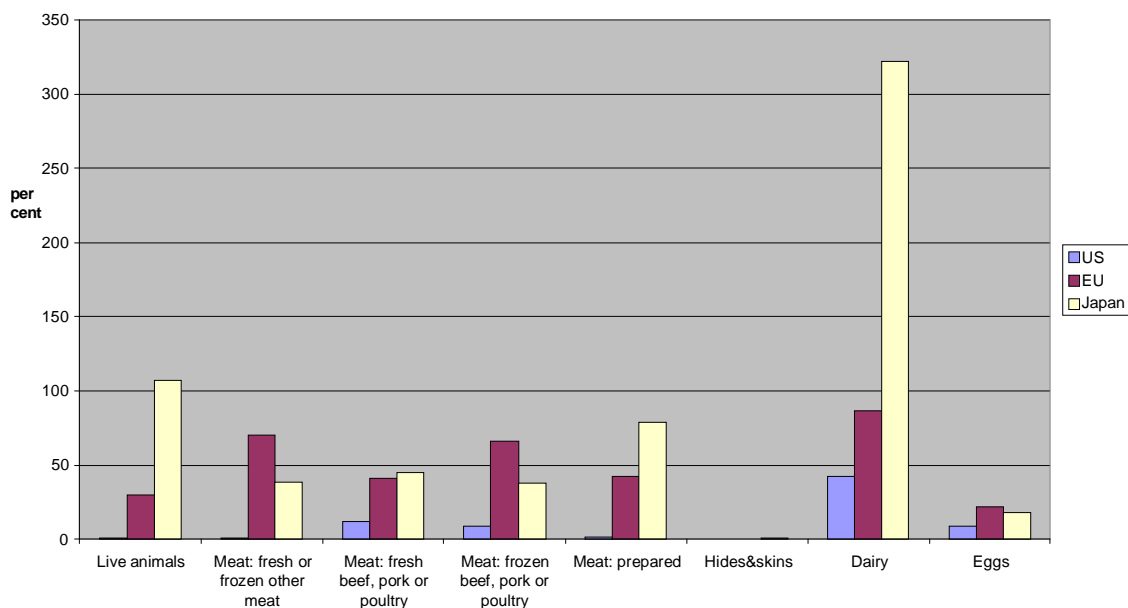
Tariffs on manufactured imports distort relative prices in domestic markets, particularly by raising costs of purchased inputs in relation to product prices. Such price distortions discourage agricultural production and exports (Kreuger, Schiff & Valdés 1988, Bautista & Valdés 1993). Tariffs may also be used to protect and support domestic agricultural or livestock producers, with consequent higher food costs for consumers. Other forms of protection, including import quotas, variable import levies, export production subsidies and voluntary control of exports may meet some or all of the aims listed above. However, in all cases the extra costs to consumers, exceed the benefits to producers plus the revenues, or minus the costs, to Government. In short all such interventions cause a net loss in social welfare. Policies that tackle the underlying development

problems directly, by providing credit to infant industries, raising public finance from general taxation, subsidising employment creation and re-distributing income to the poor, are likely to be more cost effective than the imposition of trade barriers.

Trade barriers may also include export taxes. These have commonly been levied, in the past, on primary export commodities, for instance by the cash crop marketing boards in many African countries, and by the Organisation of Petroleum Exporting Countries (OPEC). In these cases public revenue is raised but this is exceeded by the cost to potential domestic export producers. The disincentive effects may cause long-term damage to the export industry. Structural problems in the macro-economy and in particular an overvalued currency create disincentives for producers of both exports and import substitutes by reducing the domestic value of exports and making imports artificially cheap. Structural adjustment programmes, promoted by the World Bank and International Monetary Fund have been aimed at removing these distortions and barriers to trade.

The imposition of trade barriers may yield economic benefits to countries or trading blocks that are large enough to have a significant influence on the world price for an import or export commodity. A large importer can force the world price down by restricting or taxing its imports. An exporter can use monopoly power to force the price of its exports up by restricting or taxing the supply. However, the use of such policies is likely to induce retaliation by trading partners and could result in a tariff war in which all parties are worse off than they would be under a free trade regime.

Figure 6: Average tariffs on livestock products in the US, EU and Japan



Source: Economic Research Service, USDA 2001

Subsidy support for farmers in large, developed countries, of Europe and North America, has depressed world prices for the subsidised agricultural products. Trade liberalisation and the reduction of farm subsidies are therefore likely to raise world prices, and to benefit producers in other parts of the world. However, the developing countries, which are net importers of these products, may then suffer from the increased prices. At the same time, incentives will be provided for increasing domestic production and self-sufficiency, while the general expansion of trade may benefit other sectors of the developing country economies.

Trade integration and the European Union

Regional trading blocks can take the form of free trade areas, customs unions, common markets and economic unions in order of increasing integration between members. By reducing or eliminating trade barriers between members such organisations create trade, but only at the expense of diverting trade away from potentially cheaper sources in non-member countries. The European Union is one of the oldest and most strongly established trading blocks but another 150 such associations have been formed over the last 50 years and many still survive. Many of these other groups have had limited success in creating trade possibly because they share comparative advantage in the same products. However, 70 percent of EU trade is between member countries.

The Common Agricultural Policy of the European Union (EU) has provided financial support and price stabilisation for European farmers, but this has been at the expense of raising barriers against imports from third countries and thereby depressing and destabilising world prices. In the past the European Community was guilty of “dumping” meaning the disposal of agricultural surpluses, resulting from producer subsidies, at artificially low prices. This practice was prevalent in the 1980s by which time the European Community had accumulated large stocks of beef and dairy products through intervention buying. Cheap sales of beef from the European Community to coastal West African Countries in the early 1990s covered a large proportion of their demand (60 percent of the beef supply for Ghana and 40 percent of that for Côte d’Ivoire) and caused a serious drop in trade from the Sahelian Countries to the Coast (Van Ufford & Bos, 1996). It should also be mentioned in this context that low priced exports of dried milk, from developed countries to India, provided the basis for the success of ‘Operation Flood’ in the development of the dairy industry. A decline in price support through intervention buying in the European Union, together with anti-dumping measures introduced under the General Agreement on Tariffs and Trade (GATT), has reduced the incidence of dumping. None the less the EU, along with the USA and other developed countries, maintains high tariff levels, especially for temperate-zone basic food commodities (see Figure above).

Favoured treatment was offered to 70 African, Caribbean and Pacific Ocean (ACP) States under the Lomé Convention, recently replaced, as an interim measure by the Cotonou Agreement. The Lomé Convention provided for the stabilisation of export earnings and a significant reduction of tariffs on bananas, sugar, rum and beef and veal from the ACP countries. Botswana, Zimbabwe, Madagascar, Swaziland and Kenya have benefited from the beef protocol. The trade preferences to the ACP countries in particular must be abandoned by 2008 at the latest but the Least Developed Countries will benefit from free, un-taxed access to European markets for all products from 2005.

The WTO and Developing Countries

The General Agreement on Tariffs and Trade (GATT) launched in 1947 was aimed at trade liberalisation. It was not until the Uruguay Round of negotiations, from 1986 to 1994, that trade in the main temperate agricultural products was discussed. The Agreement on Agriculture, signed in 1994 called for reduction of export subsidies, reduction in financial support for agricultural producers and improved access through replacement of non-tariff barriers by tariffs which would be gradually reduced. The GATT was replaced by the World Trade Organisation (WTO), which had stronger powers, at the end of the Uruguay Round.

Major global economic benefits were predicted from the increased trade resulting from the Agreement on Agriculture and the establishment of the WTO. Most studies predict a resultant modest increase in food prices, which will benefit exporters but may exacerbate food security problems of Low Income Countries. Some authorities predict falling food prices however. Reduction of agricultural price support in Europe and the USA should lead to shifts in production and exports. Dairy exports may increase from Oceania, Eastern Europe and Southern Africa and from developing countries of South Asia and Latin America. Beef and lamb exports may expand from Oceania and Latin America. However it is predicted that Europe and North America may increase pig and poultry meat exports. Brazil, Thailand and Hungary are also predicted to increase exports of poultry meat. Developing countries, as a group, face problems not only of rising prices of food imports, but also of meeting the costs of compliance with the recommended customs and trade procedures recommended by the WTO (Finger & Schuler 1999).

Hitherto, there has been limited progress in reducing protection of domestic producers. The Doha Round of WTO negotiations, launched in November 2001 has served to demonstrate the wide diversity of levels of commitment to trade liberalisation. However, there is general agreement that 'Special and Differential Treatment' should be applied to developing countries, requiring less demanding policy changes on their part. It does little to reduce the impact of producer support in the developed countries.

Although policies in the European Union and North America have shifted away from trade distorting price supports, the overall level of support remains high, as shown in Figure 6. Indeed critics have suggested that the AOA has 'institutionalised' the production- and trade-distorting policies of the developed countries, without addressing the fundamental concerns of the developing countries (Green & Priyadarshi 2002). Other commentators emphasise the damage done to developing country producers by the agricultural and trade policies of the developed countries (Binswanger & Lutz 2000; Holden & Tanner 2003). A contrary view is expressed in Bruinsma (2003), Chapter 9, where a review of studies and assessments of the likely impacts of the dismantling of agricultural subsidies by OECD countries, leads to the conclusion that the impacts would be limited. It is argued that farmers in developing countries would benefit more from domestic policy reforms.

4. Regulatory Measures

The SPS Agreement

Trade in agricultural produce carries the risk of transmitting plant or animal pathogens and human food pollutants across national boundaries. Importers need assurance that adequate quality and safety standards have been met to protect the life and health of their people, plants and animals. Assurance can be provided by either a system of border inspections and controls, with the possible rejection of consignments not meeting the required standards, or evidence that production, in the country of origin, is in accordance with agreed quality and safety standards. In either case, some of the costs of risk limitation, by the importer, are passed on to potential exporters. Sanitary and phytosanitary (SPS) issues are a common cause of trade disputes, seen by some developing countries as disguised measures of protection. Countries of origin are therefore entitled to expect safety and quality standards to be transparent, science-based and no more trade restrictive than necessary to meet the stated objective.

The SPS Agreement of the WTO (1995) is aimed at harmonising the health and safety standards applied internationally in line with the recommendations of the International Office of Epizootics (OIE), the International Plant Protection Convention (IPPC) and the Codex Alimentarius. This involves recognising the equivalence of different measures giving the same level of protection, allowance for adaptation to regional conditions, use of risk assessment to establish the appropriate level of protection and establishment of a formal framework for consultation and dispute settlement.

While, consumers and producers in developed countries, demand high food quality and safety as well as animal and plant health standards, standards in the developing countries are usually

lower. Implementation of animal and plant health and food safety standards are constrained by resource limitations in general, including deficiencies in infrastructure, technology and skills. For nations not seeking to export to the developed countries, the existing level SPS standards may be all that can be justified economically. However, a strong case can generally be made for policies aimed at improving hygiene and the health of livestock, crops and humans. Obvious economic benefits are derived from improvements in animal and crop health, while food safety is a merit good contributing to human welfare. There are, of course, external benefits to the developed countries, of such measures, in terms of the reduced risks of introduction of disease from developing countries.

Potential exporters among the developing countries face substantial costs in meeting the rising SPS standards required by the developed countries. Of the respondents to a survey of African food exporters in the mid 1990s, 57% stated that exports had been rejected, following border inspection, within the previous two years. Internal facilities for testing and inspection before export were inadequate due to financial constraints (Mutasa & Nyamandi 1998). Participation in international committees, on technical and legal aspects of SPS control, is limited, while efforts at improvement are often hampered by the small-scale of the export trade. The costs of meeting SPS requirements for exporting livestock and other products to developed countries are very high. For Argentina to meet SPS requirements on meat, fruit and vegetables cost US\$82.7 million between 1991-96 (Finger & Schuler 1999). Upgrading slaughterhouses in Hungary from 1985-91 cost US\$41.2 million (Finger & Schuler op cit).

Hence, for all countries, both importers and potential exporters, there is a need for careful economic assessment of the costs and benefits of compliance with international SPS standards. The benefits largely consist of the reduction in risks to agricultural production and human health and the prospects for increased exports. Financial, and technical assistance is beneficial in both the appraisal and the implementation of SPS measures. For countries seeking to expand exports and negotiate trade agreements legal advice and assistance may also bring benefits.

Developing countries seeking only to trade among themselves may accept SPS standards, providing levels of disease control and food safety below those recommended under the WTO agreement. None the less there is a strong case for harmonisation and co-ordination of agreed standards within trading groups of countries.

Technical Barriers to Trade, Environmental and Animal Welfare Standards

Non-health related quality standards for traded produce are covered under the Agreement on Technical Barriers to Trade (TBT) and the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS). The former allows a country to impose 'legitimate' quality standards on

imported food provided that this is a non-protectionist activity. The latter has been applied in relation to genetic material but generally to plant genes rather than those of animals.

Environmental impacts of production, for instance pollution caused by intensive livestock production, are increasingly seen as important by potential consumers. In the Doha Declaration, environmental protection was given the same status as the protection of animal, plant and human health. However, while many developed countries have adopted policies to protect the environment, developing countries may feel unable to afford the extra costs of production which such policies entail. The difference in policies might swing the balance of comparative advantage towards the developing countries, because of their lower costs of production. In theory these countries could become 'pollution havens', although there is little evidence of this having occurred yet.

None the less, developed countries are pressing for international agreement on standards for environmental protection, in part to avoid giving an unfair cost-advantage to foreign competitors who adopt less environmentally- friendly methods of production. International agreement on measures for protecting the environment is also thought necessary since issues such as atmospheric pollution and global warming are of international concern. Some progress is being made through Multilateral Environmental Agreements (MEAs). Trade sanctions are seen as an attractive method of enforcing such agreements. However, any attempt to impose environmental protection policies on developing country exporters, through the WTO, may well be resisted. (Neumayer 2001). Discussions will undoubtedly continue within the WTO as environmental pressures grow with the increasing intensity of livestock production and other uses of natural resources.

Very similar issues arise in relation to animal welfare. Populations of high-income countries that have imposed regulations on methods of intensive livestock production to protect animal welfare, would wish similar regulations to apply to imported livestock products. Developing country producers may feel that these restrictions on methods of production are inappropriate or unaffordable in their circumstances. These issues too are likely to feature in WTO negotiations as global livestock production is intensified.

Unlike food safety and disease risk, subject to the SPS Agreement, the impact of method of production on the environment or animal welfare cannot be assessed by inspection and quality assessment. For this reason they are less easily subjected to international trade agreements. International agreements relating specifically to these issues, such as MEAs may be more appropriate. At the same time voluntary labelling and assurance schemes regarding methods of production, might allay concerns of importers and assist in promoting exports.

5. Summary and Conclusions

The context for discussion of the impact of trade agreements, on livestock producers in developing countries, is one of rapidly increasing imports of livestock products from developed countries. Increased imports are needed to meet the growing consumer demand resulting from income and population growth and urbanisation. As a group, the developing countries are net importers of all livestock products. Imports of milk and dairy products have grown slowly but still represent more than half the total value of imported livestock products. Imports of bovine, pig and poultry meat have grown much faster, those of poultry meat by 450% over the last decade.

All countries are expected to benefit from free trade since it allows each to concentrate on those products for which it has the greatest comparative advantage. Countries of Africa and Latin America may have a comparative advantage in range-fed ruminant production, but intensive poultry, pig and dairy production shifts to countries with capital, technology and scale advantages. Some middle and low income producers are net exporters of livestock products.

Import tariffs, like those imposed by the EU, USA and Japan, together with other non-tariff barriers obstruct free trade and reduce global welfare, including that of potential developing country exporters. Trade agreements between groups, such as the EU create trade between members but reduce trade with third countries. In principle the WTO should benefit all countries, including developing country exporters, by promoting freer trade. Even though, importers may face slightly higher prices, the overall impact on developing countries of the developed countries removing all trade barriers on agricultural products, is predicted to be small.

Health and food safety (SPS) standards are aimed at risk reduction for importing countries but may impose barriers against exports from developing countries because of the high costs of compliance. The WTO provides a forum for dispute settlement, but financial, legal and technical support may be needed by developing countries to negotiate settlements and comply with agreed standards. Separate, less stringent standards might be appropriate for inter-developing country trade. Other issues such as environmental impact of productive activity and animal welfare are likely to be increasingly important in future international trade negotiations.

References

- Bautista, R. and Valdés, A. 1993. *The bias against agriculture*. San Francisco: ICS Press
- Binswanger, H. and Lutz, E. 2000. *Agricultural Trade Barriers, Trade Negotiations and the Interests of Developing Countries*. Paper presented at the High-Level Round Table for UNCTAD X in Bangkok, February 2000

- Bruinsma, J. (Ed.) 2003. *World agriculture: towards 2015/2030 an FAO perspective*. London: Earthscan
- Delgado, C., Rosegrant, M., Steinfeld, H., Ehui, S. and Courbois, C. 1999. *Livestock to 2020: The Next Food Revolution*. Washington D.C.: International Food Policy Research Institute
- Delgado, C.L., Rosegrant, M.W. and Meijer, S. 2001. *Livestock to 2020: The Revolution Continues*. Paper presented at the annual meetings of the International Agricultural Trade Research Consortium (IATRC), Auckland, New Zealand, January 18-19, 2001
- Finger, J.M. and Schuler, P. 1999. *Implementation of Uruguay Round commitments: the development challenge*. Paper presented at the conference "Developing Countries in a Millennium Round". Geneva: World Trade Organisation
- Green, D. and Priyadarshi, S. 2002. *Proposal for a "development box" in the WTO Agreement on Agriculture*. FAO Geneva Round Table on Special and Differential Treatment in the Context of the WTO Negotiations on Agriculture, 1 February 2002.
- Henson, S. and Loader, R. 2001. Barriers to Agricultural Exports from Developing Countries: The Role of Sanitary and Phytosanitary Requirements. *World Development* 29(1) 85-102
- Holden, S. and Tanner, J. 2003. Trade-livestock and products. Chapter in this volume.
- Kreuger, A.O., Schiff, M. and Valdés, A. 1988. Agricultural incentives in developing countries: measuring the effect of sectoral and economywide policies. *World Bank Econ. Rev.* 2, 255-272
- Mutasa, M.P. and Nyamandi, T. 1998. *Report of the survey on the identification of food regulations and standards within the Africa Region Codex member countries that impede food trade*. Paper presented at a Workshop on Codex and Harmonisation of Food Regulations, Harare, Zimbabwe.
- Neumayer, E. 2001. *Greening, Trade and Investment: Environmental Protection Without Protectionism*. London and Sterling: Earthscan.
- Upton, M. 2001. *Trade in livestock and livestock products: international regulation and role for economic development*. Livestock Policy Discussion Paper No. 6. Rome: FAO
- USDA 2001 Economic Research Service
- Van Ufford, P.Q. and Bos, A.K. 1996. Distorted beef markets and regional livestock trade in West Africa: experience from the Central West African Corridor. *Tijds. Sociaalwetenschapp. Onderzoek Landbouw* 11 (1) 5-19
- World Bank 2001. *Globalisation, growth and poverty*. A World Bank Policy Report, Washington, DC: World Bank
- WTO 1995. *Agreement on Sanitary and Phytosanitary Measures*, Geneva: World Trade Organisation.

Appendix 1. Developed and Developing Countries

The broad classification of countries into developed and developing categories, is widely used in UN publications. (A full listing is given in Bruinsma 2003). The developed countries comprise (a) the high income, industrial countries of the Western Europe, North America, Oceania, Israel, Japan and South Africa and (b) the transition economies of Eastern Europe and Central Asia. The former group of industrial countries broadly co-incide with membership of the Organisation for Economic Co-operation and Development (OECD).

The developing countries include the mostly low income countries of Sub-Saharan Africa, low- and medium income countries of Latin America and the Caribbean, low-, medium- and high-income countries of the Near East and North Africa and low- and medium-income countries of South Asia and East Asia. Thus, there is a wide range of average per-capita income levels within the developing country category. Two important sub-classes of the developing country category, namely the 'least developed countries' and the 'net food-importing developing countries' are subject to special trade concessions under the WTO.

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