



Managing the Invisible Hand

Markets, Farmers and International Trade

by Sophia Murphy

Institute for Agriculture and Trade Policy

April 2002



Acknowledgments

While any mistakes are the responsibility of the author alone, I would like to thank the following people for their comments and suggestions: Jim Cornelius, Penny Fowler, Duncan Green, Richard Levins, Ian McCreary, Ramesh Sharma, and Steve Suppan. Dan McGuire and Emmett Dacey wrote background papers for the project. I am grateful to them both. My thanks too to Dale Wiehoff and Ben Lilliston for their encouragement and advice in getting the paper published.

André Lambelet edited the paper with his usual skill. Thank you for the advice and support.

The Canadian Foodgrains Bank financed this research project with the support of the Loewen Family Foundation and Defehr Foundation. My heartfelt thanks to Stuart Clark, Senior Policy Analyst with the Canadian Foodgrains Bank; his support included foundation fundraising and the provision of critical commentary and ideas, but above all, believing the paper was important and needed to be written. It is due to his support and encouragement that this paper is here for you to read.

The Institute for Agriculture and Trade Policy has provided leadership for work on these issues for over fifteen years. I am grateful to Mark Ritchie and my colleagues for the daily immersion in ideas and debate that has brought this work into being.

Thank you all.

Sophia Murphy

Disclaimer

The Canadian Foodgrains Bank, a partnership of thirteen Canadian church relief and development agencies, is pleased to provide support for the production of this report as part of its Global Food Policy Program. Together with its core program of food and food security programming, the Canadian Foodgrains Bank supports research and policy advocacy on global policy issues which affect the ability of hungry people to feed themselves. The influence of changing international grain markets on farmers in developing countries is one such issue.

The contents of this report are the work of its author and do not reflect Canadian Foodgrains Bank policy or the views of its supporters.

Table of Contents

Acknowledgments	
Disclaimer	
Executive Summary	1
Introduction	3
Shares of World Agricultural Exports	3
Food Security, Rural Development, and Globalization.....	5
The Peculiarities of Agricultural Economics.....	9
Comparative Advantage and Public Oversight	9
Trade, Food Security, and Development	11
Supply and Demand in Agricultural Markets	15
International Grain Markets	18
Transnational Agribusiness and Market Power.....	21
Vertical Integration in Transnational Agribusiness.....	27
Public Policy Responses.....	29
The Uruguay Round Agreement on Agriculture	29
Domestic Subsidies and the Economic Dependence of U.S. Farmers	33
Farmers, Trade and Public Policy: Options to Consider.....	39
Futures and Options	41
Co-operatives	43
The Canadian Wheat Board	45
Alternative Marketing and Production	47
World Trade Rules	49
Conclusion	52
Annex 1	55
I. Canadian Farmers Reflect on International Cereals Market and Wheat Boards	55
II U.S. Farmers Reflect on Local and Global Agricultural Economy.....	58
Expectations for the Future.....	60
Bibliography	62

Executive Summary

Agriculture is central to food security, employment, and to building broad-based economic development. Trade, too, is an important development tool. Trade is not, however, an end itself. Trade liberalization, particularly as structured in the current Agreement on Agriculture (AoA), does not necessarily move toward the underlying developmental goals articulated at the creation of the World Trade Organization (WTO), and which are the basis of most multilateral cooperation. It is time that governments ensure more coherence between trade policy and the fulfilment of development objectives.

Multilateral negotiations for agriculture are at a critical moment. Between now and March 31, 2003, governments must draft revisions to the Uruguay Round Agreement on Agriculture. After three years of discussion and drafting papers, governments have decided how they will proceed to revise the agreement. The framework is set: negotiators will focus on export subsidies, then market access, then domestic support programs in three successive meetings, with a final meeting to bring the pieces together at the end. Governments have said they will address “non-trade concerns” (which includes food security) and “special and differential treatment” (which are the measures that favour developing countries) at each meeting.

This schedule provides both opportunities and constraints for those who want to create multilateral trade rules that protect and promote food security. One constraint, clearly, is a very tight schedule (one year); another is that the agenda is not open to new issues. The opportunities arise from the fact that the rules are open to review—which does not happen often, and because the topics chosen for each meeting are broad enough to admit a variety of proposals.

The existing framework of the AoA provides many negotiators with the structure they want: a great deal of room to fight about export subsidies, domestic support to producers and agribusiness, and market access. While everyone agrees the 1994 agreement failed to do much to curb spending on agriculture in rich countries or to end export dumping, many maintain it at least provided the basis for further negotiations. This framework remains the most frequently cited positive outcome of the AoA.

To put it in simple terms, many people think there are only two things wrong with the AoA: the lack of political will to implement the agreement and the disproportionate capacity of rich countries to create exceptions to the rules for themselves. Both observations reflect abuses of power by developed countries and must be addressed. They are, however, not the only problems.

Even were the European Union to end all of its export restitution payments, the United States, Japan, and Europe to cease all payments to farmers, and all countries to establish duty-free market access for all agricultural products, not all agricultural market distortions would have been eliminated. Food security would not have been guaranteed, nor would a decent livelihood for all those living from the land have been assured. These reforms

would not ensure the most efficient use of limited natural and genetic resources. Perhaps most concretely, market distortions would continue to disrupt developing countries' agriculture.

This paper argues that AoA ignores some of the basic elements of agriculture and therefore has perverse consequences.

The paper considers the nature of agricultural trade and trends in global agricultural production. It evaluates some of the public policy responses that have been tried to manage agriculture. And it argues that the framework set up by the AoA is flawed because it ignores:

- the inelastic nature of demand in agriculture:
Food is essential to life, and should not be accessible only to those with purchasing power in the market.
- the relatively inelastic nature of supply in agriculture:
Physical stocks are necessary to protect against weather-related production shortfalls, but the high cost of maintaining the stocks limits private sector interest in this service.
- the political and economic weakness of most farmers:
Farmers are price-takers in the food system.
- the vertical integration of the agricultural system:
Chemical companies (now dominant players in the seed business) are now linked to grain traders and food processors in a production chain where price becomes internal to the industry. The same companies buy, ship, and mill grain, then feed it to livestock or turn it into cereal, often crossing several national borders in the process.
- the fact that countries do not trade; farmers do not trade: transnational agribusiness trades.

The paper proposes revisions to the WTO Agreement on Agriculture. These include:

1. Investigating and publishing the scale and scope of transnational agribusiness activities in member states. The WTO would ask governments to complete a standard questionnaire on transnational agribusiness activity. The WTO secretariat would then compile a composite view of this activity worldwide.
2. Evaluating the sources of market distortion, public and private, and discussing how best to address them.
3. Creating a WTO working group to discuss competition issues specifically related to agriculture.

Until multilateral trade rules take account of the concentration of market power in transnational agricultural trade, they cannot manage an open and fair trading system.

Agricultural trade rules need to take into account the rapidity of change in the whole agricultural sector, from seed production to food processing to retailing. At the very least, these rules must allow countries, particularly developing countries, the flexibility to block dumped agricultural products, protect food security and preserve the livelihoods of low-

income farmers. Support for the inclusion of a Development Box in the revised AoA—a proposal described in the final section of this document—would be a step in this direction.

The models used by governments to predict the outcome of the Uruguay Round Agreement on Agriculture cannot be said to have provided accurate results. They were wrong about the direction prices would take, wrong about who would get the increased exports and wrong about how farmers would respond to changes in support programmes. They failed to take into account these vital aspects of international agriculture. We need to—and can, this paper argues—go into the next round of negotiations better informed. In fact, we *must*: the lives and livelihoods of billions of people depend upon it.

Introduction

The purpose of this paper is to raise some questions as governments begin negotiations to further the process of agricultural trade liberalization begun with the Uruguay Round Agreement on Agriculture (AoA). Many of the promised benefits of deregulating international trade in agricultural products through a multilateral agreement have not been realized. Market shares have remained fairly constant, despite the promise that developing countries would increase their share. (See the following table.)

Shares of World Agricultural Exports¹

	1986-1990	1995-1998
United States	19.9 %	19.8 %
EU (external)	16.6 %	17.7 %
Sub-Saharan Africa	0.12 %	0.09 %
Cairns Group ²	1.7 %	1.8 %

At the same time, many developing countries have seen a marked increase in the imports they receive, often creating problems for their farmers who are forced out of their local markets.

In part, this is due to the inadequacy of the commitments made by developed countries in the AoA. Although the AoA was ostensibly about increasing market access and reducing

¹ Sophia Murphy, *Food Security and the WTO*. International Cooperation for Development and Solidarity (CIDSE). September 2001:Belgium, p. 14.

² The Cairns Group is made up of Australia, New Zealand, Canada, Argentina, Brazil, Chile, Colombia, Guatemala, Uruguay, Malaysia, Thailand, the Philippines, Indonesia, Fiji, Paraguay, Costa Rica, Bolivia and South Africa. This coalition of 18 agricultural exporting countries accounts for one-third of the world's agricultural exports.

both domestic support and export subsidies, most developed countries were in fact compelled to do very little to meet the AoA's requirements. Spending on agriculture in OECD countries remains high, in some cases even higher than before the agreement was signed.

This paper, however, argues that deregulated agricultural trade failed to shift production to lower-cost producers for other reasons. Most important, international agricultural trade rules have tended to focus almost exclusively on government intervention in markets, on the (false) assumption that governments create the only distortions in world agricultural markets. In fact, the entities actually involved in global agricultural trade—transnational agribusinesses—have largely been ignored in debates over trade rules. International agricultural trade rules that look only at the role of governments will not be able to create the welfare gains that are the reason for engaging in agricultural export production and international trade in the first place.

Perhaps the most basic aspect of human welfare is food security. We grow and sell food above all to ensure our access to adequate food. Agricultural production should ensure a healthy rural economy; produce abundant and safe food; manage resources, both renewable and non-renewable, in sustainable ways; and create livelihoods for people. International trade is an invaluable complementary strategy to realizing these objectives; it allows people to use their natural resources more efficiently and creates the potential for greater wealth through specialized production. International trade, however, is only of value if it contributes to these public policy goals; governments regulate trade to ensure maximum welfare gains. On its own, trade makes traders wealthy, but does not necessarily thereby contribute positively to overall human welfare.

Our multilateral rules for trade need both to maximize the public benefits from trade and to minimize the harm that one country's practices might cause another. The international community has recognized and is now trying to curb the public policies that lead to market distortions. One such policy is the dumping of agricultural products in world markets. Dumping discourages production in developing countries and reduces development potential. Because so many of the world's poor live in rural areas and depend on agriculture for their livelihoods, dumped food has an especially pernicious effect on efforts to reduce poverty. The international community, to its credit, has made efforts to eliminate export subsidies and to reduce the domestic support that encourages unwanted production.

The international community, however, has still not recognized the commercial policies and practices that lead to the same undesirable result. These policies and practices have created an increasingly consolidated global agri-food sector, which in turn diminishes opportunities for farmers, consumers and developing countries' governments to reap the benefits of agriculture as a motor for building sustainable and vibrant economies. To ensure that it creates multilateral trade rules worthy of widespread support, the next iteration of the Agreement on Agriculture must address these sources of market distortion.

The following analysis begins with a consideration of the role of agriculture in development, and then reviews some basic elements of trade theory and agricultural economics. It then looks at international grain markets and the evolving role of transnational agribusiness in agricultural production, processing and distribution. Trends in the sector are examined, particularly the growing consolidation of production, processing and marketing channels. The paper then turns to public policy responses to and their interaction with these trends—in particular, the AoA itself, and U.S. domestic agricultural policies. The paper argues that existing public policy responses are inadequate. In many cases, they exacerbate the negative trends in relation to food security, rural development and employment creation. The paper concludes with a consideration of some possible responses to this situation. First, from the perspective of farmers—what tools can they consider to respond to the market power of the businesses they deal with? Second, from a public policy perspective—in particular, what changes in multilateral trade rules might better regulate the market distortions created by the consolidation of global agricultural trade?

Food Security, Rural Development, and Globalization

Economic activity is ultimately valuable for its contribution to human welfare. Food security is one of the most basic elements of welfare—it is essential to human survival. Every person has an inalienable right to food. One of the most fundamental purposes of economic activity is to ensure adequate food. The primacy of food security is reflected in the frequent appearance of the term “food security” in WTO texts on agriculture, domestic agricultural legislation, UN declarations, and NGO advocacy efforts. In South Africa, Brazil and Norway, the right to food has already been recognized, either as a constitutional right or an implemented law.

The basic means of ensuring adequate food is agricultural production. Despite the fundamental importance of food, however, developing countries and the international development community have for many years neglected agricultural development. When levels of public spending were calculated for the Uruguay Round Agreement on Agriculture, it turned out that many developing countries used agriculture to subsidize other sectors of the economy. In other words, instead of investing in agriculture, developing countries often drained resources from agriculture. In part, they did this because economists had assumed a linear model of development. To generate the economic wealth needed for growing populations, economists believed it was necessary to transform economies from an agricultural to an industrial base.³

³ See, for example, the writings of economic historian Walt Whitman Rostow, who postulated a linear model of development that went through five stages, from traditional (largely agrarian) to the society of mass consumption (the US of the 1950s, when he was writing). In particular, *Stages of Economic Growth* (1960).

Today, most economic development theories are more sophisticated than these linear models, which, because they were oversimplified and based largely on the experience of Europe, did not factor in the very different situations that faced developing countries. It is now widely believed that both diversification and specialization are essential to ensure stable and sustainable economic development. The contribution that agriculture makes to economic growth and poverty reduction is better recognized. Agriculture is no longer a sector associated with low growth and “backwardness;” instead, it is now recognized that agriculture plays a central role in economic vibrancy at all stages of development.

Agricultural development, analysts have shown, is an effective way to generate employment and reduce poverty. Economist John Mellor argues this is not because agricultural development reduces poverty in itself, but because increasing incomes in rural areas has an immediate and significant knock-on effect by increasing demand for local goods and services, such as construction, clothes, and hired labour.⁴ Although farmers are rarely the poorest people in their societies, increasing their wealth reduces overall poverty because it boosts local employment.

In turn, rural development and farmer livelihoods directly affect food security. According to the Food and Agriculture Organization of the United Nations (FAO),

Food Security

One of the most widely-accepted definitions of food security is that adopted by governments at the World Food Summit in 1996: “Food that is available at all times, that all persons have means of access to it, that it is nutritionally adequate in terms of quantity, quality and variety, and that it is acceptable within the given culture.” (FAO, 1996, Rome Declaration on World Food Security).

The Right to Food, a legal formulation of food security, is included in the Covenant on Economic, Social and Cultural Rights as well as the more recent Declaration of the World Food Summit. Many community-based organizations and NGOs are now seeking government ratification of a Code of Conduct on the Right to Food, to give the concept greater operational effectiveness.

Food security is an individual, household, provincial, national, regional and international issue. Food security requires attention to supply, distribution, access, quality and education to ensure a nutritious diet. Each element is essential. Access to food depends on many factors, including income, food supply and cost, personal endowments and the possibilities for exchange. In many international agreements, as in some domestic legislation, governments have taken responsibility to ensure food security. Recent work on food security has focused on the intra-household relations, particularly gender and age as factors in access to food in the household.

⁴ John W. Mellor, Background Paper: “Reducing Poverty, Buffering Economic Shocks—Agriculture and the Non-tradable Economy”, prepared for Experts’ Meeting, 19-21 March, 2001, Roles of Agriculture Project, FAO: Rome. On-line at <http://www.fao.org/es/esa/roa/roa-e/EMPDF/PROCEED/BG/MELLOR.pdf>

With 70 percent of the world's extremely poor and food insecure people living in rural areas, the role of agriculture, which is the predominant economic activity in rural areas, is crucial in the eradication of poverty and food insecurity. The rural poor depend on agriculture both for their incomes and food entitlements. More generally, in most countries with a high incidence of food insecurity, agriculture is the mainstay of the economy. It accounts for a large share of gross domestic product (GDP), employs a large proportion of the economically active population, represents a major source of foreign exchange and supplies the bulk of basic foods.⁵

Of course, food security does not depend on farmers and food production alone. Other factors—the distribution of land, and access to capital, markets, and labour—all play a significant role.

Citing the work of C.P. Timmer, Mellor shows that where landholdings are particularly concentrated in the hands of a few landowners, the benefit to the wider economy is reduced because larger, richer landowners are more likely to consume imported goods and services than to spend the additional income in the rural areas where poverty is concentrated.⁶ In other words, economic growth based on agricultural development and equitable land distribution provides a strong basis for economic growth and poverty reduction.

Thus, food security depends on agricultural production; trade (distribution in local and international markets); employment (availability of work, so people can exchange labour for income to buy food); transfers (usually from government, but also from families and communities, which usually provide for children and the elderly).

Farmers' welfare is vital to sound agricultural development. Food security is also linked to trade (the markets available to producers to sell their crop), labour (availability of work for people without land to exchange for income to buy food) and transfers (usually from government, but also from families and communities, which usually provide for children and the elderly).

Farmers' prosperity depends on their capital base (including access to land, water, credit, seed and animal stock) and their economic power (how much profit they can earn from the production of food). International trade increasingly affects both these elements: access to resources and relative economic power. As a consequence of the wider changes associated with globalization, including the liberalization of capital movements and the rapid diffusion of new technologies, international trade plays an increasing role in every country's economy. For example, British supermarkets, which want to meet their customers' demand for fresh fruit and vegetables all year round, have become significant investors in the agricultural sectors of several African countries. Thai rice now competes with domestically produced cassava in the markets of Senegal. Grain companies, long a presence in global

⁵ FAO (2001), "Some Issues Relating to Food Security in the Context of the WTO Negotiations on Agriculture", Discussion paper no. 1, Round Table On Food Security In The Context Of The WTO Negotiations On Agriculture, Geneva, July 2001.

⁶ Mellor, *op. cit.*

shipping and food processing, have developed new partnerships with chemical and seed companies in the last five years, co-funding research and marketing of genetically-engineered seeds and foods.

In some cases, the changes associated with globalization have spurred new international initiatives to develop stronger international regulations. In the agricultural sector, heightened concerns about food safety have led to trade disputes and then to new initiatives to develop internationally agreed-upon standards and norms that are politically acceptable to the people and companies affected.

In other cases, international policy prescriptions have shaped the direction of globalization. For example, through much of the 1980s and 1990s, international financial assistance was conditional on recipient countries reducing their tariff barriers, making their currencies convertible, servicing their debt obligations and increasing export production. These programmes prompted a shift towards export agriculture that has transformed the rural economies of many developing countries.

While many developing-country farmers remain subsistence producers, they increasingly face competition from internationally traded goods in their local markets.⁷ At the same time, many farmers face pressures to turn to export production, either to meet growing demands for cash (to pay for school fees, hospital bills, or farm inputs) or in response to government (and international aid programme) incentives that seek to increase foreign currency earnings through agricultural exports.

Increasing export crop production is not necessarily a problem: it can bring employment, investment, and access to new technologies. In practice, however, the changes have increased the vulnerability of small producers, or driven them from their land permanently. Export crops tend to demand more capital and less labour. They increase dependence on outside factors and leave the most abundant local resource—people—untapped.

In this rapidly changing context for food production, many farmers find survival difficult. Whether they operate in the United States, the Philippines, or Mali, farmers share common experiences of losing market power vis-à-vis their buyers. They face increased competition from imports, but do not reap the benefits market access in theory should bring.

Why have efforts to increase access for developing countries to developed-country markets failed? European export subsidy programmes, enormous spending by developed countries on domestic support, and persistent high tariffs on some products in large markets (such as on sugar in both the United States and European Union) have been blamed for the failure of increased market access opportunities to benefit farmers. However, it is doubtful that the removal of all tariff barriers and the elimination of the European export subsidy system would make much difference to the average farmer's marketing opportunities—other

⁷ Many of these farmers do, of course, participate to some extent in the cash economy. Their primary production, however, is consumed by the household.

changes may be more important. Dumping, (the sale of agricultural products at less than cost of production prices in the local markets of developing countries) is an important problem. Unregulated market power exercised by the transnational companies involved in agricultural trade, whether grain companies, food processors or supermarkets, is another.

Farmers themselves rarely export directly. They are far more likely to sell their crops to middlemen, supply crops under contract to transnationals, or work as hired labour on foreign-owned plantations. Farmers' interest in expanding markets is thus indirect. Their immediate interest is in keeping production costs low and in maximizing the price of the crops they sell.

The struggle by farmers to increase their market power is not new. In a study of the history of agricultural cooperatives in the United States, the Institute for Agriculture and Trade Policy's Emmett Dacey writes,

Farmers have cooperated to gain advantage in the two markets they operate in—the input market, where they must purchase seed, fertilizer, and machinery; and the output market, where they attempt to get the highest price they can for what they have produced. Cooperative action has been an attempt to remedy a situation famously summed up in the adage, “Farmers buy everything at retail and sell everything at wholesale...⁸”⁹

The Peculiarities of Agricultural Economics

Today, globalization is changing the nature of farmers' struggle to ensure a good living. However, before considering these changes over the last ten or so years, it is also worth challenging some of the assumptions that underlie the promises made for enhanced agriculture and food security in the name of liberalized and deregulated trade.

Comparative Advantage and Public Oversight

The market, many economists and policy-makers believe, works best by what Adam Smith called the “invisible hand.” That is to say, the collective outcome of millions of self-interested decisions by buyers and sellers, producers and consumers—without centralized planning or guidance—maximizes the common good. The free market, in this view, results in the greatest possible welfare for society as a whole.

To Smith's notion of the invisible hand, the Scottish economist David Ricardo added the notion of comparative advantage. The theory of comparative advantage holds that all countries are relatively good at producing some things—each has a comparative advantage over other producers by virtue of its natural resource endowment, climate, literacy levels, proximity to markets, capital reserves, and so on. Ricardo argued that it is most efficient for a

⁸ Cited in Marty Strange. “Family Farming-A New Economic Vision.” University of Nebraska Press (Lincoln) & Institute for Food and Development Policy (San Francisco): 1988, P.279.

⁹ Emmett J. Dacey, “The Virtues And Vices Of Farmer Owned & Controlled Marketing Systems,” paper prepared for IATP, Minneapolis: October 2001, p. 1.

country to concentrate production in the areas where it has a comparative advantage, even if it has an absolute advantage (or disadvantage) in all products. This is because its relative advantage will not be the same for all products, creating an economic gain if it focuses production on its more competitive products. The surplus it produces can be traded for goods produced by others with a different comparative advantage.

Much of the writing and thinking that dominates discussions of international trade today is premised on this notion of comparative advantage. International trade in this theory is a tool to ensure efficient distribution of goods, allowing the lowest cost (used as a proxy for most efficient) producer to set world prices.¹⁰ The model sees market barriers such as tariffs and unfair advantages such as export subsidies as impediments to the free flow of goods—and thus as impediments to the maximization of welfare.

The insights of the classical economists were remarkable. For example, in his discussion of England's Corn Laws, Smith pointed out the surprising fact that grain merchants operating in the domestic market (whom he distinguished from those with an export interest or access to imported supplies) and consumers have a common interest. While the merchants want to charge the highest possible price and the consumer wants the lowest, both share an interest in exhausting a fixed supply (the current year's harvest), but not before the next harvest is in. Prices set too low will stimulate excessive consumption, and risk famine, while prices that are too high will discourage consumption and leave the merchant with unsold stock at the end of the year. Smith argued that a natural equilibrium is reached, if the market is left to work unimpeded, where each bushel of grain will sell for its "correct" value, set between the demand of the consumer and the supply managed by the merchants.¹¹

The neo-classical model of agricultural markets proposes markets that are open: free of tariff barriers or export subsidies, and with domestic support programmes that are not linked to production levels or price. In this view, state trading enterprises, such as the Canadian Wheat Board or the Indonesian importer, BULOG, have no place, since by their very nature (monopolies operating under governmental protection) they distort markets.

Today transnational companies that actually trade agricultural commodities also use the language of comparative advantage. For example, in anticipation of the 3rd WTO Ministerial conference held in Seattle in November 1999, Cargill declared:

The food and agricultural community must work together to keep food at the center of the WTO agenda. Rising incomes and population will double the world's need to produce, handle, process and distribute foodstuffs within one generation. The world must avoid the

¹⁰ Among many versions of the theory, see John H. Jackson, *The World Trading System: Law and Policy of International Relations*, second edition, fourth printing, M.I.T. Press, USA:2000. pp. 14-18.

¹¹ Adam Smith, "Digression concerning the corn Trade and Corn Laws", chapter V, book 4, *An Inquiry into the Nature and Causes of the Wealth of Nations*, first published 1776. Available on-line at <http://www.adamsmith.org.uk/smith/won-intro.htm>

unnecessary cost of building that food system twice—first around walls of protection and then along lines of comparative advantage as those protective walls eventually crumble.¹²

However, in the enthusiasm for open markets, the necessary role of public oversight tends to be overlooked or downplayed. For markets to work at all—as Smith and Ricardo acknowledged—governments must enforce laws to avoid the creation of cartels and renegeing on contracted commitments. They must ensure information on supply and demand flows easily and provide customs officials to control borders. The WTO is not just a forum where governments bargain for increased access to other countries' markets. It is also where governments establish rules for international commerce—it embodies a public oversight function that is necessary for international trade (and open markets more generally) to work efficiently.

Much has changed since Ricardo and Smith wrote some 200 years ago. Not least, capital, which was assumed to be a fixed factor of production, is now highly mobile. This transforms the discussion of natural endowments that comparative advantage relies on. With today's technology, and financial and trade policies, companies are likely to base investment decisions on where their final market is, where the lowest cost labour can be found, and where the investment climate is most advantageous, undermining the assumptions that led to the theory of comparative advantage. Also missing in the assumptions of comparative advantage are the costs of trade (for example access to transportation, proximity to export markets, administrative overheads) and the limits of our natural resource base, particularly to absorb pollution which are largely external to current accounting.

If the notion of comparative advantage is to retain relevance, clearly these new factors must be taken into account.

Trade, Food Security, and Development

The relationship of trade to food security is complex. At its most obvious level, trade is a source of food for countries that cannot, or choose not, to grow all of their own supply. Very few countries, if any, are entirely self-sufficient in food, although some could be if they chose. Many countries could never envisage total self-sufficiency—as products of history, politics, war, geographical contours and numerous other factors, economic autonomy was only one element in their creation. Thus, barter or trade is as old as the most ancient civilizations—in their earliest social structures, families and communities specialize their labour, often along gender and age lines, so that not only can everyone be fed, but houses built, children raised and clothes made.

Governments face a dilemma: how much faith should they put in the economic growth potential promised to those who embrace more open trade? How much effort should they expend to protect the livelihood of vulnerable populations and how best to do it? In India,

¹² Rob Johnson, "Cargill Commentary", *The Cargill Bulletin*, November 1999, Vol. 7, No. 3. Minneapolis.

that rural population numbers some 500 million people—nearly double the entire population of the United States. In China, estimates on the impact of China's accession to the WTO predict that 1.6 million farmers will lose their jobs each year for the next five years, as China changes policy to conform to the WTO agreements.¹³ The farmers are judged to be unproductive, and so the government wants them off the land. In a country already facing significant social and economic challenges as a growing number of rural residents risk government censure and move to cities illegally in the hope of bettering their lives, these numbers give reason for concern.

In many countries, farmers struggled for decades against overbearing government policies that undermined their production and marketing options. In developing countries, some farm associations welcomed the policies of the international lending institutions that required governments to end this interference. Farmers often welcomed the opportunity to sell more of their production through international trade. However, the alternative offered has proven just as problematic—with no regulation on the imports coming in, they find themselves competing with heavily subsidized agribusinesses, and thereby squeezed out of their own markets.¹⁴

Most developing countries continue to grow up to 90 percent of the food they consume. However, the world's poorest countries import considerably more than that—up to 30 percent in some cases. Not only do different countries have different needs, but different countries also have different capacities to pay. Some developing countries have a steady supply of foreign currency with which to purchase food; others do not. As the Nobel-prize-winning economist Amartya Sen has pointed out, a country such as Cape Verde with a relatively healthy balance of payments and relatively poor land is wise to invest in export production to earn foreign currency to buy, among other things, the food to feed its people.¹⁵

On the other hand, countries whose foreign exchange supply is limited, or which are better endowed with land suitable for agricultural production, need to consider the relative costs and benefits of dependence on external supplies of food. Even a food balance deficit of 10 percent or less may represent a threat to food security if the country in question cannot be sure of the resources to pay for it. The International Food Policy Research Institute (IFPRI) points out that it is the ratio of food imports to total exports, rather than just the relative percentage of imported food in the total food supply, that indicates a country's vulnerability

¹³ "Ready for the Competition?" *The Economist*, Sept. 15th-21st 2001, US edition, pp. 35-36.

¹⁴ UNCTAD, 1999, "The Impact Of Changing Supply-And-Demand Market Structures On Commodity Prices And Exports Of Major Interest To Developing Countries", p. 5, UNCTAD/COM.1/EM/2, Report by the UNCTAD Secretariat to the Commission on Trade in Goods and Services, and Commodities. 7-9 July 1999, Geneva.

¹⁵ Jean Drèze and Amartya Sen, *Hunger and Public Action*, Clarendon Press, Oxford: 1989.

to food insecurity.¹⁶ The high prices of cereals on world markets in 1995-96 seem not to have had much lasting impact on local food prices in developing countries. However, the decline in the value of total exports since 1996, which has been greater than the fall in cereal prices in world markets, has increased low-income countries' exposure to food insecurity. These countries are earning less foreign exchange for their exports, and so cannot afford to buy as much on world markets.¹⁷

Trade is also linked to food security in less direct ways. Agricultural products are a significant source of developing countries' export revenue, particularly in Africa. Economic growth, trade balances, and many livelihoods are tied up in the production of agricultural products for export. Trade affects government revenues, both in the costs it imposes on administering borders, and the income it generates as a tax base. Moreover, with international trade comes investment—a factor that has changed enormously as a result of globalization. The most significant growth in the agricultural sector since the advent of recent globalization policies has been in processed food. Much—but not all—of this has bypassed developing countries. This shift is represented not only by the growing share of processed food in total agricultural trade, but in new patterns of investment in developing countries' agricultural sectors. For example, British supermarkets have become large investors in fresh vegetable production in Kenya and Zimbabwe. (These fresh vegetables are considered processed food because the vegetables are cleaned and packed and sometimes otherwise prepared before shipping.) In North America, increased trade under NAFTA is in part the result of intra-firm exchange—from Cargill's grain division to Cargill-owned maize mills of Mexico City or to Cargill beef feed lots in Alberta.

Increased trade can increase the supply in local markets, thereby reducing prices, which may help consumers meet their food security needs. However, in the long run, lower prices may depress local production, which in turn will reduce supply, eliminate livelihoods and so eventually push prices higher again. Farmers are a key component in addressing poverty. In some cases, they are themselves among the poorest members of society; in others, they are an important source of employment for rural labourers, often landless, who in turn are almost invariably the poorest of all. Farmers' access to food can depend on relatively high prices for their production, despite the resulting increase in prices they then pay as consumers for food. Ironically, low food prices in the market may signal that certain populations will face hunger, because their livelihoods depend on strong prices for agricultural products.¹⁸

¹⁶ Eugenio Dias-Bonilla et al, *Food Security and Trade Negotiations in the World Trade Organization: A Cluster Analysis of Country Groups*, Trade and Macroeconomics Division, Paper No. 59, International Food Policy Research Institute, Washington DC: December 2000. p.7.

¹⁷ *Ibid.* p.7

¹⁸ C. Peter Timmer, *Getting Prices Right: The Scope and Limits of Agricultural Price Policy*, Cornell University Press: Ithaca, 1986.

Because of the very significant concentration of market power in both the global trade in commodities and the food retail trade in developed countries, trade liberalization policies have not been as successful at delivering cheaper food to consumers as their advocates predicted. Before the NAFTA agreement in North America and the AoA were finalized, economists predicted that prices of agricultural products would increase slightly after implementation. They have instead fallen precipitously, continuing a downward trend that has persisted for decades. Consumer prices, on the other hand, have not declined.

Mexico provides a very dramatic example of this: maize prices for local farmers have declined from about 1300 pesos per ton in 1982 to just under 600 pesos per ton in 1998. Yet the retail price of a tortilla increased by almost 500 percent between 1994 and 1999. While a large part of this was due to the inflation that followed the peso crisis of 1998, and some was also due to the elimination of government subsidies for consumers, prices still doubled in real terms at a time when the price of corn almost halved.¹⁹ A similar pattern emerged in the United States. As the economist Robert Taylor recently testified to the U.S. Senate Agriculture Committee, “Since 1984, the real price of a market basket of food has increased by 2.8 percent, while the farm value of that food has fallen by 35.7 percent.” The point is not that trade liberalization cannot benefit consumers, but that in practice it has not. Both farmers and consumers face prices that diminish their welfare.

In the discussion aired at the WTO, trade expansion quickly becomes a proxy for development and economic growth. The Director General of the WTO, Mike Moore, along with many developed country delegations at the WTO, has adopted the language of development as the reason for global trade rules. The trade round launched by the Doha Declaration at the fourth WTO Ministerial Conference in November 2001 has even been dubbed the “development round”.²⁰ But some developing countries and many NGO commentators firmly reject this language, pointing out that very few developing countries expressed any support for the broad trade round outlined in the Doha Declaration. A growing number of commentators reject the conflation of trade expansion and economic growth. Trade is only a tool: like other tools, its usefulness needs to be measured by its effectiveness in realizing particular goals.

In his recent paper for the United Nations Development Programme (UNDP), “The Global Governance of Trade as if Development Really Mattered”, Harvard Economics Professor Dani Rodrik says the current trade rules, “...over-emphasize trade at the expense of poverty reduction *and* growth.”²¹ Rodrik asserts that the assumption that growth and poverty

¹⁹ Alejandro Nadal, 2000. *The Environmental and Social Impacts of Economic Liberalization on Corn Production in Mexico*, Oxfam GB and WWF International. Pp 24,34-36.

²⁰ “With the launch of the Doha Development Agenda we have placed development issues and the interests of our poorer Members at the heart of our work.” (from Mike Moore’s Informal New Year’s Message to WTO Members, 2 January, 2002, published on-line at http://www.wto.org/english/news_e/news_e.htm).

²¹ Dani Rodrik, “The Global Governance of Trade as if Development Really Mattered”, UNDP Background Paper, USA: October 2001, p. 11.

reduction are at odds is wrong—the evidence shows that growth generally raises the incomes of the poor, and that poverty-reduction will almost always stimulate economic expansion. What he questions is the assumption of a necessary match between an open trade policy and economic growth: “A close look reveals that there is no convincing evidence that trade liberalization is predictably associated with subsequent economic growth.”²²

Rodrik’s plea for a heterodox approach to trade rules, and his rejection of the WTO as a forum for harmonizing rules in favour of an acceptance of “institutional diversity” among countries is relevant to the discussion of agriculture and trade. His point is that a single set of rules, in the case of the AoA written to address the problem of abusive subsidy use and tariff protection by a small handful of countries, is unlikely to answer the range of challenges facing the 150 or so developing countries. Rather, the WTO should provide a forum where countries can discuss and negotiate more flexible rules that acknowledge the different needs countries’ face while acknowledging the shared need for multilateral rules that prevent abuses of power among countries of unequal strength.

As we have seen, then, trade has a complicated relationship to food security and development. Some of the challenge of developing ideal rules to manage international agricultural trade lies in the nature of agriculture itself, and the particularities of supply and demand in the sector. In turn, these particularities have generated a series of public policy responses, which have created their own challenges to the system. Yet even understanding these complicated relationships is not enough. We also need to understand and take into account the particular nature of agricultural economics.

Supply and Demand in Agricultural Markets

As we have seen, price is the all-important signal in a market-based economy. In theory, price indicates relative supply—the less there is of something, the more it will cost—and demand—the more someone wants something, the more he or she will pay for it. At some point, the price will go above where demand exists, or below a level where further production makes sense. Between the two, there are points of equilibrium, that “tell” producers and consumers how much something is worth.

However, there are gaps between market economics and meeting basic human needs. As FAO and others have pointed out, meeting effective demand for food is not the same as ending hunger and malnutrition. For one thing, the market cannot reflect the demand of consumers who do not have the purchasing power to be present in the market. The United States, like all other developed countries, has an abundance of food; nevertheless, some people are too poor to buy their food on the market. In most developing countries, this problem is much more acute. India, for example, is relatively self-sufficient in rice: it can meet demand with its domestic supply. Some 50 percent of its people, however, live below

²² Dani Rodrik, “The Global Governance of Trade as if Development Really Mattered”, UNDP Background Paper, USA: October 2001, p. 11.

the poverty line. Hundreds of millions of Indians are hungry, but make no demand on the available supply because they lack income. Were it to be reflected on the market, this “missing” demand would pose a considerable challenge to supplies. No matter how open agricultural markets become, farmers feeding pigs and cows in Europe will retain their superior purchasing power over people living in poverty unless underlying market failures are addressed.

There is, of course, some elasticity in food markets. How we meet our caloric needs can and does vary with income. As people get richer, they eat fewer starches (bread, rice, cassava) and more vegetables, fats, and protein, particularly meat. Within this range there is some elasticity of demand—grains of different types may be substituted for one another, depending on relative price, while consumption of more expensive foods is affected by income. In Mexico, the importation of vast amounts of U.S. animal grade corn (yellow maize) has displaced the market for the white maize traditionally used for tortillas (and source of income for 3 million farmers—40 percent of those active in agriculture).²³ U.S. corn is now used by millers to make flour for tortillas, despite its nutritional inferiority, because it is cheaper.

Culture, fashion and convenience also play a part in determining preferences and in some cases transforming traditional diets. As households move to urban settings where all the adult members work outside the home, access to more processed food becomes a priority to save time. This in part explains the expansion in production and trade of processed foods.

Nonetheless, demand for food is not as sensitive to price as most products because food is not like most products. People need to eat to survive, and will spend everything they have to avoid starvation. In economic jargon, demand is relatively inelastic. In developing countries, many people typically spend 50 percent or more of their income on food; poor people in developed countries also spend a high proportion of income on food. However, once basic caloric needs are met, demand drops off sharply. As income rises, people spend a smaller and smaller proportion of their income on food.²⁴ At some point, food could drop to almost zero cost, but still fail to generate increased demand from consumers. Food, unlike cars, stereos or sports equipment, is not something that can be forgone altogether, or consumed on a sliding scale. People need approximately 2000 calories a day to live; if they consume more than about 4000 calories, they begin to suffer health problems related to obesity.

The supply of agricultural products is also inelastic. Supply of many cereals comes once or twice a year at harvest time, even though people need food every day of the year. Supplies of basic grains cannot be timed to meet consumer demand—they must be stored against future need. Moreover, despite the increasingly sophisticated technology available to farmers

²³ Alejandro Nadal, 2000. *The Environmental and Social Impacts of Economic Liberalization on Corn Production in Mexico*, Oxfam GB and WWF International. p. 4.

²⁴ This phenomenon is known as the Engels Law after the economist who described it.

in developed countries, weather remains all-important and unpredictable. The surest way to raise crop prices is for a significant growing region to suffer a drought or other weather-related disaster. The resulting high prices, in turn, are not necessarily a signal that increased production (or planting) is needed. They are just a reflection of the temporary shortfall, which may easily be followed by a bumper harvest the following year.

The unpredictable nature of supply year-to-year makes stocks vital, not just to keep food in the market at affordable prices, but to prevent famine. The “just-in-time” production method that is helping transform the globalized economy is not applicable to grain production. Although prices on the markets are volatile and can change dramatically from month to month, supply responses are slow and complex. Land is not easily brought in and out of production, and a farm equipped to produce wheat cannot quickly turn to potatoes or horticulture.

To guarantee food security, someone, somewhere, must manage physical stocks of grain over the long term. However, storing grain is very expensive—a fact reflected in the grain companies’ practice of whenever possible managing their supplies virtually, in the form of contracts for purchase and delivery, rather than in physical stocks. Public storage programmes are a commonly used means of reducing volatile food prices.²⁵ Yet many of the big producer countries have reduced their holdings, in part because they are expensive to maintain, but also because of disciplines introduced by the AoA; its rules discourage public stockholding. The effect has been significant: for example, between 1991 and 1999, European Commission expenditure on storage fell from 18.3 percent of total Common Agricultural Policy costs to 4 percent.²⁶

The relatively inelastic nature of both supply and demand in agriculture complicates the operation of the market. If a harvest fails, countries will not willingly forgo imports even if prices are high, because access to food is so fundamental to human welfare. A responsible government will take what steps it can to guarantee a minimum, affordable food supply, rather than allow market prices to determine demand. Almost all governments, whatever their political persuasion, intervene in the market to ensure that most people are fed. While the current push for fully liberalized trade markets for agriculture ignores this fact, in practice the AoA is full of exemptions for public spending on agriculture. This is not only a recognition of the political impossibility of banning such programmes, but perhaps an acknowledgment of the role well-designed public action can play in correcting market failures.

Governments have a long history of seeking to protect producers and consumers against extreme fluctuations in food prices. In the interests of a fed, and therefore quiescent, population as well as a productive, and therefore profitable, agricultural sector, governments

²⁵ Alexander Sarris, 1998, “Price and Income Variability,” OECD Workshop on Emerging Trade Issues in Agriculture,” Organization for Economic Cooperation and Development: Paris.

²⁶ European Research Office, 2001, “The Future Of The Common Agricultural Policy: Implications For Developing Countries”, draft paper, p.3, Brussels.

have experimented with supply management through land set-aside programmes, import and export controls, production quotas, and price floors. They have also tried many programmes aimed at consumers, including food stamps, ration shops and minimum wage laws.

In the long run, of course, economic policies do have an important effect on land-use patterns. Farm subsidies in the United States and Europe have encouraged an intensification of land use, dependent on petro-chemical inputs, which would otherwise not have been economically viable. Similarly, with few border restrictions on imports and no investment in roads, irrigation, credit provision, or agricultural technologies, farmers in many developing countries have been forced off of otherwise productive farms into cities. Government programmes have not provided a perfect solution to market failures, and in too many cases, have generated their own series of perverse consequences, some of which will be considered later in this paper.

The inelasticity of supply and demand in agriculture also affects farmers' market power. Agricultural production is seasonal; the harvest of a given crop happens at one time for all producers in a given climactic zone. Unless farmers have some means to store their crop, they are forced to sell when their product is most plentiful (at harvest time) and therefore least valuable. This will be at a price that is lower than the crop is actually worth when demand is considered over the whole year. A farmer who can afford to hold food off the market until the harvest season has passed has significantly more market power than the farmer who must sell the crop for income as soon as it is harvested. In agriculture, market power has historically come less from production than from the ability to supply consumer demand—which is the service a grain merchant or food retailer typically provides. Farmers have found various ways to counteract this relative loss of power: by organizing into collectives that market their own produce (as many farm cooperatives do); by obtaining government support to manage reserves (as U.S. farmers did until the 1996 farm legislation); by unionizing to bargain collectively with the grain merchants and governments.

International Grain Markets

Having considered the anomalies of agricultural economics from the perspective of supply and demand, how does trade fit into the discussion? For trade policy to support vibrant rural economies, it needs to be based on a clear understanding of agricultural economics. Too often, this is not evident in the debate on agriculture and trade. The following section illustrates some of the features of global agricultural trade that are too often omitted from the models and arguments used in debates on global trade rules.

A first point to remember is the distinction between those who actually trade—by and large transnational agribusiness—and the countries where crops are raised, where producers and consumers operate. For the most part, we talk about agricultural trade as a national matter; we hear statements such as, “the U.S. supplies about one third of the corn that is traded internationally”; “developing countries account for just over 40 percent of

international trade in agricultural products”, and, “OECD export subsidy levels are now close to U.S.\$1 billion a day”. Almost all of the literature that came out as the AoA was under negotiation discussed likely changes in terms of which countries would win and lose market share.

The World Trade Organization rules are designed to address *national* policies that distort global markets for agriculture. In particular, they are intended to curb subsidy use and to remove trade barriers. What the rules do not address, except obliquely by reference to state-trading enterprises, is market power and the question of monopoly and oligopoly power. This oversight means much of the modeling from academics, and the rhetoric surrounding different negotiating positions taken by national delegations, miss essential aspects of the agricultural sector in most countries.

However, transnational companies in the food sector, rather than national governments, really drive agricultural economics. What we don’t hear in the debate, and don’t properly know, is exactly how much of world agricultural trade is handled by Cargill, or Nestlé or Carrefour—the companies that buy, process and retail the food that finds its way to international markets.

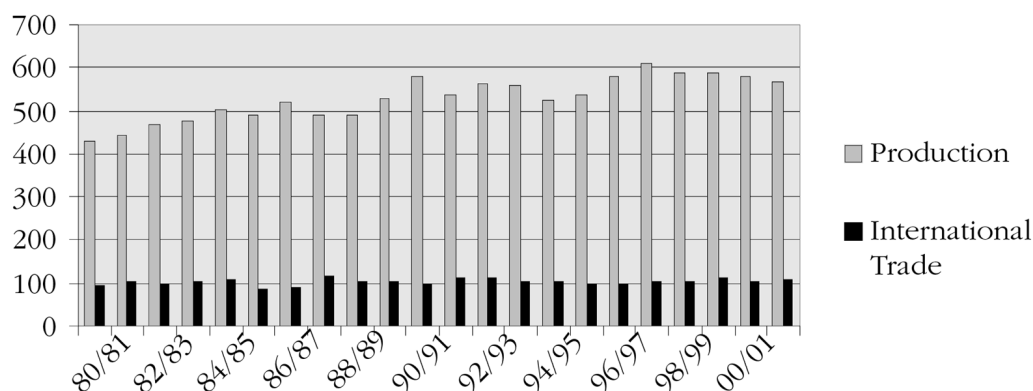
In the globalizing agricultural sector, the United States and Brazil do not actually compete with each other for share of the world soybean market. Instead, they compete for investment by Cargill or one of the other large grain traders that operate worldwide. These companies trade in grains, and are also big end users of grain, as owners of flourmills, feedlots and food processing companies around the world. Understanding the behaviour of transnational companies and their rapid evolution is essential to understanding how world markets function.

A second point is that most people have a simple and often idealized notion of how agriculture and the food system work. We know food is produced on farms (although quite how big some farms are might amaze us). Perhaps some of us know a farmer, or even have family members who farm. We have a rather hazy idea of products coming from the farm to market, where consumers come and buy them. The phrase ‘world grain market’, in turn, may conjure images of a huge bazaar where American, Canadian, French, Russian and Argentine merchants come to set up their stalls and sell their goods. Whoever has the best quality and lowest price sells the most. Most people no doubt assume that their local market is the smallest, in terms of the number of sellers, and the global market the largest market.

The opposite is true. Most food is consumed in the country where it is grown. The world trade in most crops is a relatively small proportion of total production—17 percent of total world wheat production, 11 percent of coarse grains (maize, barley, oats and others), and 6 percent of world rice production.²⁷ Even soybeans, which are grown largely for

²⁷ Calculated by and cited in Peter Einarsson, “Agricultural trade policy as if food security and ecological sustainability mattered”, a report for Church of Sweden Aid, Forum Syd, the Swedish Society for Nature Conservation and the Programme of Global Studies, Sweden. November 2000. p.10.

World Wheat Production 1980-2001
(Source: USDA in MMT; 2001/02 est.)



From Dan McGuire, 2001, "The Structure of World Markets in Wheat, Corn and Rice", paper prepared for Institute for Agriculture and Trade Policy, Minneapolis. p.1 MMT stands for million metric tons.

processed foods and animal feed, are mostly consumed in the country where they are grown; only 30 percent of production is traded internationally. In other words, the global market is a small market for most foods; for some crops there is no global market at all. Only a few commodities, such as coffee and cocoa, are raised primarily for export.

A third point to note is that the production of many grains is relatively concentrated. The largest single wheat producing country in the world is China, whose annual production over the last five years has averaged 109 million metric tons (mmt) per year. China's average production is equivalent to all the wheat traded in international markets. The European Union averaged production of 99 mmt a year over the past five years, making it the world's second largest producer. India comes in third with 70 mmt and the United States is fourth with 63 mmt.²⁸ However, the United States is the largest wheat exporter, despite a steady decline in its share since 1980. U.S. market share of world wheat trade has fallen from an average of nearly 40 percent in the first half of the 1980s to 23 percent in the last half of the 1990s.

The United States is the largest corn producer in the world. It grows about two thirds of the world total, a number reflected in its exports: in the 1999/2000 marketing year the United States supplied 67 percent of world corn exports. The second largest producer is China, with less than half the U.S. levels; next come the 15 members of the European Union, with less than half of China's total production. China is also the second-largest corn exporter, with 14 percent of world corn exports. Argentina is third with 12 percent, Hungary

²⁸ Here and following, Dan McGuire, 2001, "The Structure of World Markets in Wheat, Corn and Rice", paper prepared for Institute for Agriculture and Trade Policy, Minneapolis. p.1.

has two percent, South Africa has one percent, and others combine to capture four percent of world corn exports.²⁹ U.S. corn exports have remained at about the same level for the last 25 years, while other countries have increased their export volumes.

Over 90 percent of world rice production is from Asia. Rice provides from 35-80 percent of the calories consumed by some 3.3 billion people in Asia. Rice production also provides a livelihood for an estimated 250 million people there. Only 6 percent of rice production is traded internationally. Global rice production is constrained by the dependence of Asian rice-growing countries on the same monsoon system.³⁰ (This means if the monsoon fails in India, it will likely fail in Thailand and Bangladesh, too.) Although rice is grown in many different regions, the size of demand for rice in Asia makes it hard to use the world market to obtain adequate supplies outside the region should the monsoon fail. This makes the world rice market highly volatile. Leading exporters are Thailand, Vietnam, China, the United States, India and Pakistan.

Taken together, the inelasticity of both supply and demand for food, the essentially local nature of production and consumption, and the concentration of production for export in relatively few countries, have a significant bearing upon the way that agricultural trade operates. Added to these, however, is the role played by transnational agribusiness—to which we now turn.

Transnational Agribusiness and Market Power

Fewer, bigger, more diversified across the range of commodities, and more vertically integrated upstream to the farmers' level and downstream in transport and processing—this is how one can characterize trading houses now as compared to two decades ago.³¹

Most farmers, even in developed countries, still operate relatively small farms. To be sure, globalization has not by-passed agriculture, and farm production has become increasingly concentrated. For instance, by 1999, eight percent of all farms accounted for 68 percent of U.S. production.³² Where the food system has really become extremely concentrated, however, is among input suppliers (sellers of fuel, fertilizer, seeds, pesticides, etc.) and grain buyers, processors, and retailers. This concentration has accelerated over the

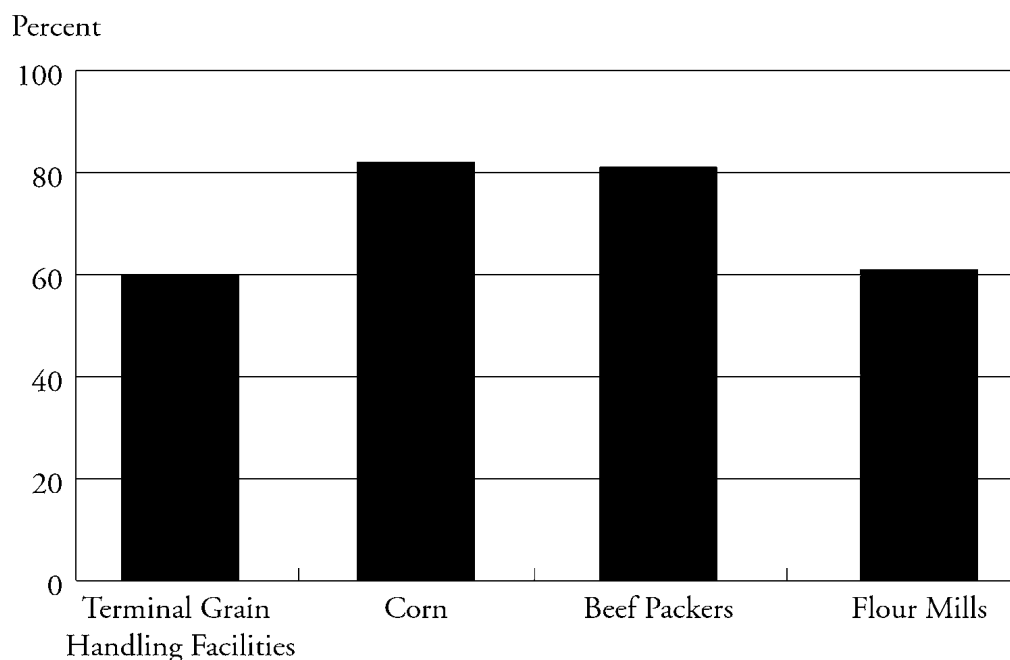
²⁹ Dan McGuire, 2001, "The Structure of World Markets in Wheat, Corn and Rice", paper prepared for Institute for Agriculture and Trade Policy, Minneapolis. pp. 8-9.

³⁰ Here and following, Dominic Egleton, 2001, *The International Rice Market: A Background Study*, Oxfam GB, Oxford, p.ii.

³¹ UNCTAD, "The Impact Of Changing Supply-And-Demand Market Structures On Commodity Prices And Exports Of Major Interest To Developing Countries", p. 10, UNCTAD/COM.1/EM../2, Report by the UN Conference on Trade and Development Secretariat to the Commission on Trade in Goods and Services, and Commodities. 7-9 July 1999, Geneva.

³² The U.S. Department of Agriculture classifies these farms as large family farms (sales between US\$250,000 and US\$499,999), very large family farms (sales of US\$500,000 or more) and nonfamily farms, which are run by corporations, cooperatives or by hired managers.

Concentration in U.S. Agricultural Markets



■ Percent of U.S. market held by the top three or four companies.

60% of terminal grain handling facilities are owned by four companies: Cargill, Cenex Harvest States, ADM and General Mills. 82% of corn exporting is concentrated in three companies: Cargill, ADM and Zen Nob. Beef packing is dominated by an 81% share among four companies: Tyson, ConAgra, Cargill and Farmland Nation. 61% of flour milling capacity is owned by four companies: ADM, ConAgra, Cargill and General Mills. Source: Heffernan, William with Hendrickson, Mary and Gronski, R. (2002), Consolidation in the Food and Agriculture System, Report to the National Farmers' Union, U.S.A.

past twenty years, and, while it has particularly affected farmers in developed countries, few farmers anywhere have been left untouched by these changes.

A handful of large grain companies—among them Cargill, Continental, Louis Dreyfus, André and Bunge—play a central role in the food system. (Although these companies are hardly known to the general public, farmers are all too aware of their market power, as interviews conducted in both Canada and the United States, provided in annex 1, make clear.) A 1986 estimate suggested that 85-90 percent of global trade was controlled by these five companies.³³ These five companies have been in the grain trade since the late nineteenth century or earlier.³⁴ All are privately owned; seven families are involved among the five

³³ Butler, Nick (1986), *The International Grain Trade: Problems and Prospects*, p. 4, St. Martin's Press, New York, U.S.A.

³⁴ Dan Morgan (1980), *Merchants of Grain*, Penguin Books: UK, p. 60 and following. Morgan's history makes a fascinating read, going from the earliest days of the grain trade to the late 1970s.

firms.³⁵ Each of the companies is present in dozens of countries, across all continents: Cargill boasts of doing business in over 160 countries. And, as the reach of these companies grows ever greater, the grain market grows ever more concentrated. Of the top ten grain companies in the United States (measured by capacity) in 1995, one—Continental, the then-fourth-largest firm—has been purchased by the largest firm, Cargill, while the sixth-, seventh-, and ninth-largest firms are now linked in joint ventures with the second largest-firm, Archers Daniel Midland (ADM).³⁶

But these firms not only have an enormous impact on the function of the grain market: these multi-billion dollar operations have broadly diversified interests. Cargill, for example, own a huge financial services unit, alongside its salt, steel, cotton, seed, and fertilizer businesses. Cargill is also among the top three beef producers in the United States, and plays an important role in poultry production. In addition, Cargill owns and runs an enormous worldwide transportation business, with ships, trucks, barges and railcars, as well as grain elevators for storage. Thus, developing rules that provide incentives and controls to regulate the behaviour of such firms requires more than a focus on agricultural production and grain sales: it requires an understanding of the peculiar economics that drives these firms and markets.

One peculiarity is that multinational grain companies—unlike farmers, whose income is a function of those prices—are not always interested in base prices. As Richard Gilmore has written, grain traders are more interested other factors:

The key to profitability in the grain trade is not the price itself but a host of other factors, including the variation in price levels for a commodity at any given point in time, the spread between cash and futures prices, interest rates, the state of the money markets and transportation costs... volume is essential to profitability.³⁷

Grain traders' profit is a percentage of the sale—higher prices are fine, especially once the traders control a good supply, but high volume of sales at lower prices is also profitable. In fact, because the grain companies have a significant interest in keeping the barges, rail cars and ships they own busy, higher volume may at times be more important to the companies' profits than high prices. Given the diversity of grain companies' economic interests, high grain prices have become a cost for them in other areas of the business: high grain prices make it more expensive to feed hogs and cattle and to make tortilla flour, all of which bear on the companies' profits.

³⁵ The remarkable resilience of these family-owned companies has lasted through generations. This year, however, Bunge made available shares for the first time to raise capital with an initial public offering of US\$16/ share.

³⁶ Dahl, R. (1998). "Structural Change in the Grain Marketing Industry" in Larson, D., Gallagher, P.W., & Dahl, R. (1998). *Structural Change and Performance of the U.S. Grain Marketing System*, p. 118, Ohio State University: USA.

³⁷ Richard Gilmore, 1982, as cited in Margherita Scoppola, 1995, "Multinationals and agricultural policy in the EC and USA", *Food Policy*, Vol. 20, No. 1, p.14.

Another peculiarity of agricultural markets lies in the advantages that transnational companies have in keeping competitors out of the market. Their global reach and presence gives them access to information that, even in the age of the Internet, is otherwise scarce and difficult to obtain. Prices depend not only on supply, but also on forecasts about the future availability of commodities. Futures and options markets, such as the Minneapolis grain exchange, are intended to provide a public forecast or indicator of the prices expected a few months hence. Because grain companies operate with far more information than the average farmer, and because grain companies' economic interest in price is formed by different considerations, their calculations of risk are made from entirely different bases.³⁸

Furthermore, transnational agribusinesses have access to enormous amounts of capital. Commodity trade is expensive. Deep pockets are necessary to ride out fluctuations in price and to pay for insurance, shipping and other trading costs. Merely to operate on the futures market requires significant capital: bidders must supply collateral to ensure that they can deliver on the contracts they hold. If a seller promises in April to deliver a bushel of wheat in September and the price goes up in July, regulators require that the seller deposit additional money in the collateral account until the sale is completed. The rise in price means that the seller's expected profit has risen—but so has their up-front need for capital.

Because they own banking, processing and shipping businesses, transnational agribusinesses respond to different economic pressures than do farmers. The biggest grain companies have remained profitable through the short-term shifts from remarkably high grain prices in the 1970s to the depression in the 1980s, as well as the persistent long-term price decline through the last century. Even the largest of the farmer-owned cooperatives have not fared anywhere near as well; many have had to radically change their objectives to stay in the business.³⁹

The wealth and size of the transnational agribusiness also make them politically powerful. Transnational agribusinesses are large contributors to the political system in the United States and elsewhere. Their staff moves in and out of government administrations and bureaucracies: a former Cargill Vice-President, Dan Amstutz, drafted the original text of the WTO Agreement on Agriculture while working at the United States Trade Representative's office—and later returned to the grain trade. Grain traders also dominate the boards of trade that govern the commodity exchanges. In most countries, transnational agribusiness is much more powerful than farm organizations. Moreover, the global nature of grain trading operations simultaneously gives transnational agribusiness political power in many countries. This distinguishes them from state-trading enterprises, which are confined

³⁸ Elisabeth Cleveland, 1996, "Commodity Futures and Options Markets: A Means Towards Food Security?" *Sustainable Food Security Fact Sheet*, No. 7, Institute for Agriculture and Trade Policy: Minneapolis.

³⁹ Emmett J. Dacey, 2001, "The Virtues And Vices Of Farmer Owned & Controlled Marketing Systems," paper prepared for IATP, Minneapolis.

by national mandates. The Canadian Wheat Board, for instance, can by law only handle Canadian grain.

U.S. farmers now view concentration in agribusiness as their single largest problem.⁴⁰ The economist Susanna Davies, writing in 1986, raised questions that seem to have remained otherwise invisible in the literature on agricultural trade.⁴¹ Davies argued—quite reasonably, given their success in the face of highly volatile markets and steadily declining grain prices—that the dominance of the largest grain traders should be treated as a given. She then asked how assumptions about grain markets and the way they operate should be adjusted to consider this dominance.

Unfortunately, trade negotiators and analysts have largely ignored the question. Debate at the WTO has overwhelmingly emphasized governments, farmers and, to a lesser extent, consumers. Yet the power of transnational agribusiness continues to increase as globalization takes hold. For developing and developed countries, for farmers and consumers, no matter where they live, the need to come to terms with this new reality is growing increasingly urgent.

Open competition is the bedrock of capitalist economics. In the neo-classical understanding of markets, prices act as signals to which buyers and sellers respond; their competing interests create an equilibrium. Neo-classical economics recognizes a number of threats to markets and the proper functioning of prices. On the supply side, the archetypal threat to competition is monopoly, the condition in which a single supplier of a product sets the price by controlling its supply. Oligopoly, the situation when a few suppliers share the market to the exclusion of newcomers, similarly prevents demand and supply from reaching a proper equilibrium. On the demand side, monopsony and oligopsony describe an industry with a single or a few buyers, respectively. These, too, effectively stop the market from finding a proper equilibrium. Each of these four conditions prevents prices from properly acting as the signal needed for markets to work most efficiently. Equilibrium cannot come from the (distorted) marketplace, and so the industry must be regulated to control profit levels and restore equilibrium. For example, privately owned and operated utility providers often have a monopoly but their profits are capped at a publicly regulated maximum to avoid price gouging.

Some economists have recently added new ideas about market power to the traditional categories of monopoly and oligopoly.⁴² They focus instead on the size of potential profits a firm can make and on its ability to keep competitors out as indicators of its market power. Large corporations need not be monopolies to have market power (consider Intel or CNN,

⁴⁰ Richard A. Levins, 2000, "Farmers and Agribusiness: Partners or Competitors?", *A Food and Agriculture Policy for the 21st Century*, pp. 79-84, edited by Michael C. Stumo, Organization for Competitive Markets, Nebraska.

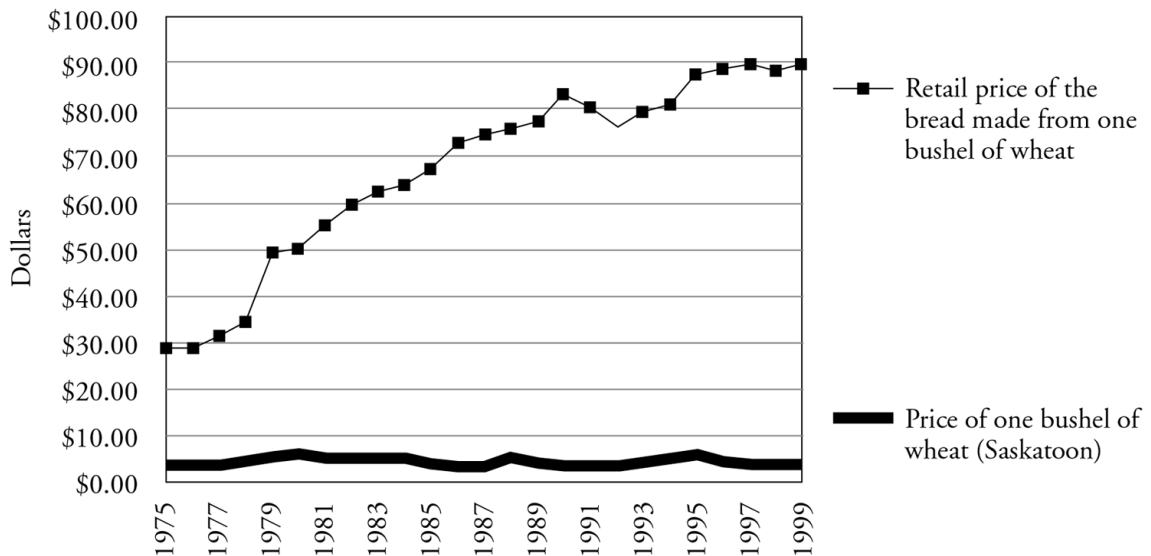
⁴¹ Davies, Susanna (1986), "The Grain Trading Companies", pp. 90-112.

⁴² For an overview of these ideas, see Thomas Karier's *Beyond Competition*, M. E. Sharpe, 1994.

for example), while some monopolies are insignificant because the good they control is not worth much, or the reach of the monopoly is too small to generate much profit.

As market barriers between countries are reduced and finance is liberalized, competition becomes an international question as well. Let's say a company with 20 percent or more of a given market is considered to have excessive market power. What if that company has more than 20 percent of the global market? What if, to be competitive globally, companies need 100 percent of local markets to maintain even a five percent share of the global total? It is common today to hear companies in many industries declare that they must consolidate to be competitive at the global level. At what point, however, does a world market with a small handful of players create excessive market power? As the companies claim, competition among the top grain trading multinationals is in all likelihood ferocious. At the same time, however, these grain-trading multinationals share a strong common interest in keeping other competitors out. And they shown they have the market power to do it.

Wheat and bread prices: 1975-99



Source: *Consumer Prices and Price Indexes*, Statistics Canada Cat. # 62-010 and *StatFacts* 10.03, Saskatchewan Agriculture and Food. From the National Farmers' Union, 2000, "The Farm Crisis, EU Subsidies and Agribusiness Market Power", Saskatchewan, p. 22.

While suppliers are increasingly global in their reach, however, consumers remain tied to local markets. Their purchasing power is measured in ringgits, dinars, or pesos, rather than in U.S. dollars. International trade may increase the choice of products available to consumers, but will not necessarily deliver those products at low cost, especially in local terms. The decline in prices for commodities has not necessarily translated into cheaper food

for consumers. Why this should be so is not altogether clear, but it is worth asking to what extent the concentration of market power in the food system is to blame.

A recent brief prepared by the National Farmers' Union of Canada illustrates how wide the gap between commodity price and final product has become (see below). Some argue the markets for wheat and bread are now so distinct that the price of wheat no longer has much effect on the price of bread. Either way, consumers are not benefiting from the wheat sold at below cost of production prices, and in fact are paying indirect costs of that wheat, through government payments to farmers who cannot earn a decent price from the market.

Vertical Integration in Transnational Agribusiness

A paper by University of Missouri economist William Heffernan provides a compelling description of recent changes in the food and agricultural system.⁴³ The paper argues that new forms of relationship are emerging among firms in the food chain. These new relationships are mostly ignored in policy debates, yet are vital to an understanding of what drives change in the sector. They describe these new relationships as clusters, which are facilitating the emergence of vertically integrated production systems in which, from seed to supermarket shelf, there is no point of sale, and thus no "price discovery".

Vertical integration describes an industry where one company owns multiple stages in a production chain. For example, Dole owns plantations and canning facilities, and has the marketing power to bring pineapples from fields in the Philippines to consumers from India to Iceland. Horizontal integration refers to consolidation at a given point in the production process. For example, Kroger Co., a supermarket chain, is estimated to receive 10 cents of every dollar spent in a supermarket in the United States⁴⁴ and three firms ship 81 percent of all corn that is exported from the United States.⁴⁵

The poultry industry in the United States is an example of both these kinds of integration. Virtually all chicks raised for consumption as poultry are exchanged for money only when the meat processor sells them to the supermarket. All stages of production, from the hatching and rearing to the slaughter of the chicks, are internal to the company. In this vertically integrated industry, there is no point at which prices for poultry can be discovered, because there is no independent check on the costs at different stages of production. The wages paid to labour may be disgracefully low and the price charged for the chicks might be

⁴³ William Heffernan, with Mary Hendrickson, and R. Gronski, 1999, "Consolidation in the Food and Agriculture System", Report to the National Farmers' Union (US), NFU, USA.

⁴⁴ Mary Hendrikson, et al, 2001, "Consolidation in Food Retailing and Dairy: Implications for Farmers and Consumers in a Global Food System", report to the National Farmers Union, USA, p.2.

⁴⁵ Mary Hendrickson and William Heffernan, 2002, "Concentration of Agricultural Markets", report for National Farmers Union, Washington DC. On-line at: nfu.org/documents/01_02_Concentration_report.pdf

unfairly high, but these have become an internal question for managers to decide rather than a point where open market forces can intervene.⁴⁶

Both horizontal and vertical integration have the potential to distort markets and diminish welfare. United States Department of Agriculture economist James MacDonald cites the railroad industry as an example: when two of three competing railroad companies left the business, freight rates increased by 20 percent.⁴⁷ Interestingly, when MacDonald turns to the beef-packing industry, his analysis suggests that the distorting forces of integration have had little effect. Concentration in the industry has increased dramatically (the largest four companies controlled 36 percent of the industry in 1980, but a staggering 75 percent in 1992), but the price spread between farmgate and wholesale prices fluctuated but did not show a trend increase.⁴⁸ MacDonald explains the supposed lack of distortion by noting the low entry barriers, along with structural changes in the industry that included rapid expansion in capacity and a change in the cast of companies that dominated the sector.

Looking at the beef-packing industry over a longer period, however, suggests that the market-distorting forces of concentration were not wholly absent, merely delayed. In the last ten years, concentration of the top four companies in the beef packing industry has reached 81 percent.⁴⁹ USDA data shows that between 1995 and 2000—years MacDonald did not include in his study—the farm to wholesale price spread for beef soared by 24 percent. This suggests that, having increased concentration, the companies remaining in the field were then able to increase their profits.⁵⁰

The top four beef-packers are Tyson (owner of Iowa Beef Packers), ConAgra, Cargill (owner of Excell Corporation), and Farmland National Beef Packing Company. Three of these four (Smithfield replaces Farmland) are also the top pork packers; two (Tyson and ConAgra) are among the top poultry producers. Cargill ranks among the top three or four companies across the sector, from beef and pork packing, to turkeys, animal feed, grain terminals, corn exports, soybean exports, flour milling, soybean crushing, and ethanol production.⁵¹

The companies that dominate the grain trade are part of vertically integrated conglomerates, whose financial interests are varied. For many of them grain has become a cost in the production of livestock and processed foods, where profit margins are much

⁴⁶ The struggle becomes akin to that of unions seeking fairer wages within an industry rather than competition creating alternatives.

⁴⁷ James M. MacDonald, 2001, "Agribusiness Concentration, Competition and NAFTA", Economic Research Service, US Department of Agriculture, US, p. 8.

⁴⁸ *Ibid.*, p. 9.

⁴⁹ Mary Hendrickson and William Heffernan, 2002, "Concentration of Agricultural Markets", report for National Farmers Union, Washington DC. On-line at: nfu.org/documents/01_02_Concentration_report.pdf

⁵⁰ Peter C. Carstensen, 2000, "Competition, Concentration and Agriculture", *A Food and Agriculture Policy for the 21st Century*, edited by Michael C. Stumo, Organization for Competitive Markets, Nebraska, p. 32.

⁵¹ Mary Hendrickson and William Heffernan, 2002, *op. cit.*

greater than in the grain trade itself. Cargill, for example, is the largest grain exporter in the United States and probably in the world. It is also ranked seventh in the world as a food and beverage company.⁵² With its company Excel, Cargill is also a major player in the beef packing industry. As grain prices have collapsed over the last four years, livestock industries have benefited from the cheap feed. Consumers, however, have continued to pay the same price for meat in the supermarket. The profit, evident in the spread between farmgate and wholesale price, has been captured by companies such as Cargill.

Vertical integration in the food and agricultural sector of the United States and the European Union deserves international attention because it overturns the assumptions that have impelled governments to embrace trade agreements and to change their agricultural policies to increase dependence on imported food. To date, few corporate mergers or joint ventures have received public scrutiny outside the country in which they are headquartered. However, this may be an area of regulation that needs more attention because of effects in third-country markets, and because of the possible impact of vertical integration on the price and availability of food in the world market.

Public Policy Responses

This snapshot of the rapidly changing commercial context of agricultural production provides a different lens through which to understand international trade and agricultural policies. How can public policy better address the rapidly changing agri-food sector? A brief review of the history of the analysis that preceded the conclusion of the Uruguay Round Agreement on Agriculture (AoA), as well as of the implementation experience, illustrates why we need a more informed understanding of transnational agribusiness as countries embark on negotiations to review the AoA.

The Uruguay Round Agreement on Agriculture

The Predictions

In the midst of the political struggle to achieve consensus on the Uruguay Round agreements, a variety of inter-governmental agencies developed models to predict the outcomes of implementing new, more liberal, trade rules. The FAO established the World Food Model, UNCTAD created the Agricultural Trade Policy Simulation Model and the OECD and World Bank jointly produced a model called Rural-Urban North-South or RUNS. Each model produced several outcomes, depending on the variables used and assumptions made about the likely extent and effects of the AoA.⁵³

⁵² *Ibid.*

⁵³ A good summary of the different models and their predictions can be found in Sharma, R., Konandreas, P. and Greenfield, J. (1996), "An overview of assessments of the impact of the Uruguay Round on agricultural prices and incomes", *Food Policy* vol. 21, No. 4/5, UK: Elsevier Science Ltd.

Initially the models promised that trade liberalization would bring enormous rewards. However, as the negotiations drew to a close and the relatively modest commitments in the AoA became clear, the models were adjusted accordingly. The models predicted that prices for temperate agricultural products would rise, but not by much. The combined effect of reductions to domestic and export subsidy programmes and increased market access for imports was supposed to reduce production in developed countries. This would in part be offset by increased production in the former Soviet bloc and developing countries, where dumped surplus production from developed countries and poor domestic policies had depressed production.

The models all dealt with changes for countries, and more often sub-continental regions and even whole continents. They did not consider the impact of liberalization *within* countries, or on specific sectors of the population. The models assumed perfect competition—and thus ignored the role of trans-national agribusiness.

FAO was one of very few intergovernmental organizations that raised some doubts about liberalizing agricultural trade under the proposed AoA rules. Their model suggested that the AoA would accelerate the already-established trend of developing-country dependency on food imports. FAO thought food imports would grow by 62 percent in value terms for developing countries as a whole and that 15 percentage points, or approximately a fourth of this increase, would be due to the AoA.⁵⁴ FAO did not specify what other factors might affect this shift.⁵⁵ What is important to note is that FAO's model suggested that developing countries' dependence on food imports would grow because of the AoA. As suggested earlier in the paper, this growing dependence on imports raises potential problems for food security.

On a more positive note, the same FAO models forecast that developing countries' overall agricultural trade balance would improve as a result of the agreement, which would generate valuable foreign exchange. About 40 percent of the expected gain was attributed to the liberalisation measures of the AoA. But the models also showed that the gains would not be evenly distributed among regions, nor among countries within a region. Sub-Saharan Africa, the poorest region in the world, was widely expected to lose out under implementation of the AoA. This alone was enough to discredit the agreement in the eyes of many NGOs. From the perspective of social justice, public policy changes should at a minimum not hurt the already least advantaged.

Kevin Watkins, a researcher with the U.K. NGO Catholic Institute for International Relations, predicted that over-production would not be curtailed, and that under-priced

⁵⁴ Jim Greenfield, M. de Nigris and Panos Konandreas (1996), "The Uruguay Round Agreement on Agriculture: food security implications for developing countries", *Food Policy* vol. 21, No. 4/5, UK: Elsevier Science Ltd, pp 365-375.

⁵⁵ These other factors might include the delay between growth in demand caused by population growth and an increase in domestic supply, or some of the reforms introduced by structural adjustment programmes.

imports to developing countries would increase under the AoA. He, like many others, argued that cutting price support mechanisms would not reduce production in developed countries.⁵⁶ This position was reinforced in Europe after the 1992 McSharry reforms to the CAP, which reduced floor prices but did not succeed in reducing production levels.

The U.K. NGO Christian Aid predicted that the losers would fall into four (overlapping) categories, all from developing countries. The losers would include countries that had benefited from the Lomé Convention and other preferential trade schemes; countries that were net food importers; countries that relied heavily on income from cocoa and coffee exports in particular (whose prices were on a downward trend); and countries that lacked the capital and capacity to use the new trading opportunities created by the Uruguay Round Agreements.⁵⁷

Implementation

What, then, actually happened? It is difficult to isolate the impact of the AoA on these changes. Despite the eagerness of economists to predict outcomes of proposed trade agreements, they have been considerably more reluctant to embark on *ex post facto* analysis. In all cases there are national and regional situations that have to be weighed in any causal explanation of what happened to food prices.

In a 1999 study of 14 countries, FAO analysts concluded that agricultural exports from developing countries in the post-Uruguay Round period increased sharply over the immediately preceding years. Twelve of the countries also saw the value of their agricultural exports increase, while five saw them decline. However, there was little diversification of products and destinations. As some NGOs had predicted, supply constraints limited countries' ability to take advantage of the few new openings in the market. Most importantly, the cost of food imports in all 14 countries rose significantly (ranging from 30 to 168 percent). This increase in the cost of food imports outweighed the benefits of increased export sales, leaving 11 of the 14 countries reviewed worse off from a food security and balance of payments perspective.⁵⁸

Clearly the AoA alone is not to blame for these changes. However, the agreement has limited the range of instruments available to governments to protect themselves from unanticipated changes in the world market situation. A more useful exercise than trying to isolate the impact of the AoA is to ascertain whether trade rules contribute to or detract from

⁵⁶ Watkins, K. (1991), *The World Agricultural Trade Crisis and the Uruguay Round: Implications for the South*, p 6 (draft version), CIIR: UK.

⁵⁷ Madden, P. and Madeley, J. (1993), *Winners and Losers: The impact of the GATT Uruguay Round on developing countries*, p 22, Christian Aid: UK.

⁵⁸ FAO 2000, "Synthesis of the country case studies", *Agriculture, Trade and Food Security*, Vol. II, country case studies, FAO, Rome.

policies that ensure food security. At this time, it is not clear that increasing developing countries' participation in world markets bolsters their developmental or food security goals.

The FAO case studies also revealed a trend towards concentration of agricultural landholdings. This concentration was credited for increased productivity and competitiveness, but also blamed for increased unemployment and poverty among farmers marginalized by these changes. While farmers with larger landholdings are likely to be better situated to negotiate with transnational agribusiness, increasing the concentration of landholding may not only fail to reduce poverty, but may make it more widespread.

The AoA has not had the predicted effect in the developed world, either. Although the European Union and the United State have both made important changes in their respective domestic agricultural policy—changes that have reduced the prices farmers receive for cereals—AoA disciplines have not reduced agricultural production in either place. Nor has the changed nature of support to farmers and the price volatility in the post-Uruguay Round period shifted production away from the commodities most traded in world food markets: wheat, soybeans, and maize. Production of some of these commodities has even increased. Public spending on agriculture in the United States has increased, yet, as the next section shows, average farm income has declined precipitously. Under the new policies, more money is now being spent to less effect.

Nor has the AoA had the predicted effect in Least Developed Countries (LDCs) and Net-Food Importing Developing Countries (NFIDC). In 1995 and 1996, cereal prices shot up. This price spike generated a substantial increase in LDC and NFIDC cereal import bills. Although analysis by the International Food Policy Research Institute (IFPRI) suggests this was only a blip in the medium-term, a subsequent fall in prices has not brought food import bills back to previous levels.⁵⁹ The cost of cereal imports for LDCs increased 85 percent between 1993/94 and 1995/96. NFIDCs' cereal import bill increased 68 percent.⁶⁰ Despite the fall in world prices since, the FAO says the combination of lower levels of food aid and a decreased supply of subsidised exports led to food import bills that in 1998 were still 20 percent higher than in 1993/94.⁶¹ With less food available on preferential or grant terms, countries were forced to import more food on a commercial basis. At the same time, many developing countries have seen their currencies depreciate, making food important more expensive.

This difference might also reflect the difference between the world price, which is only a reference price, and the prices at which trade is actually carried out—transportation,

⁵⁹ Eugenio Dias-Bonilla et al, *Food Security and Trade Negotiations in the World Trade Organization: A Cluster Analysis of Country Groups*, Trade and Macroeconomics Division, Paper No. 59, International Food Policy Research Institute, Washington DC: December 2000.

⁶⁰ Jadot, Y. and Thirion M.-C. (Nov 1998), "Organisation Mondiale du Commerce et Sécurité Alimentaire en Afrique Subsaharienne", Solagral: France.

⁶¹ Konandreas, P., Greenfield, J. and Sharma, R. (1998), "The Continuation of the Reform Process in Agriculture: Developing Countries' Perspectives", seminar paper, p 9, FAO: Italy.

insurance, credit rating and other costs affect both the price the seller actually commands and how much the buyer actually pays.

Overall, since the ratification of the AoA, world prices for grains have fallen, but food costs more for the countries (and the consumers within them) that most need it. Dependence on food imports has risen dramatically among countries that are not well placed to pay for their food in hard currency. Attempts to reduce excessive production in developed countries by changing the nature of subsidies and removing tariffs have failed. Farm income in the United States has reached new lows; production continues to rise. Volumes of trade have increased, but evidence of the anticipated welfare gains is much harder to find.

Are domestic policies to manage agricultural markets faring better than global trade rules? A look at the domestic agricultural programmes in the United States suggests not. Rather than achieving their ostensible goal of supporting farm income and ensuring a stable food supply, they are accelerating the process of corporate concentration in the global food sector.

Domestic Subsidies and the Economic Dependence of U.S. Farmers

The U.S. experience shows the pitfalls and fallacies of agricultural reforms based on neo-liberal assumptions that ignore transnational agribusiness market power. It is common for trade analysts to assume that public subsidies in the United States allow farmers to sell below their cost of production and remain profitable. If this is so, then ending subsidies should allow the most efficient producers to succeed while putting inefficient producers out of business. Output should decline until prices rise to the point where producers recoup their production costs and even win a profit. The analysis assumes that domestic support is the only factor inhibiting supply responses to the steady decline in commodity prices, which logically should be telling farmers to stop producing ever-less profitable crops.

Reflecting this thinking, the United States introduced radical changes to its farm legislation in 1996. Under the Federal Agriculture Improvement and Reform Act (FAIR), the United States ended its system of floor prices for many commodities, including most grains.⁶² Under the FAIR legislation, payments were to be reduced to zero over a period of 7 years, starting in 1997. In their place, “decoupled” payments were instituted—payments based on the historic production levels of a given farm, but not linked to that year’s production or price. Such decoupled domestic support has been declared non-trade distorting by the AoA. It is listed in annex 2 of the agreement (the so-called Green Box), which means that no spending limits are applied.

In practice, payments have been increasing over the last three to four years because world prices have fallen so low. In the current negotiations to renew farm legislation, an exercise that

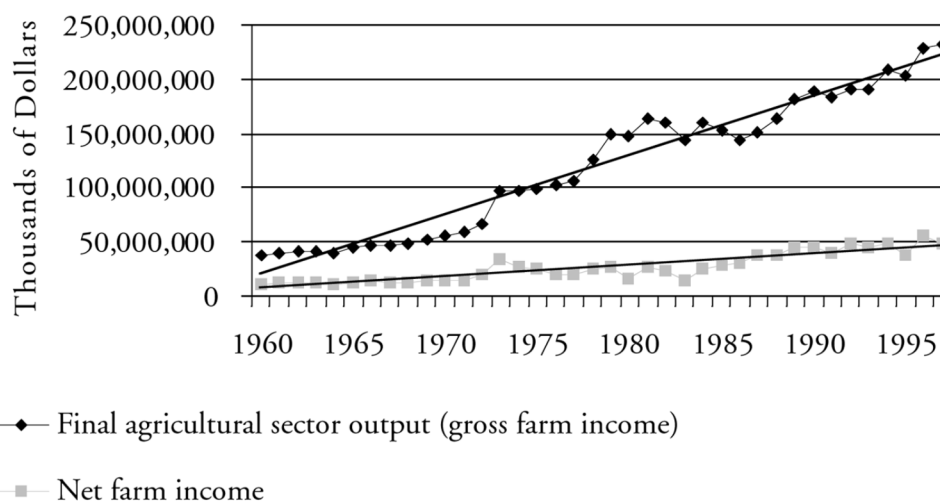
⁶² The exceptions include sugar, peanuts and tobacco, which continue to be regulated by supply-management programmes.

occurs every five or so years, the failure of FAIR either to curb public spending or to help farmers is widely recognized.

Low world prices have not greatly affected output. Instead, the empirical evidence suggests that the United States has fewer farmers, larger farms, as much land in production as before and similar, even increasing, levels of production. Between 1987 and 1997, the number of farms in the United States that sold hogs has dropped by over 50 percent, the number that harvest wheat for grain has dropped by 30 percent, and that for farmer-owned milk cows has dropped by over 40 percent.⁶³ Yet output has not fallen accordingly.

Most importantly, the billions of dollars in annual subsidies (up to US\$ 28 billion last year) do not stay with the average farmer. A 1998 survey of farm records for southwest Minnesota found that average net farm income was US\$ 8,616. The corresponding government subsidy was US\$ 30,000.⁶⁴ Farm operations are so unprofitable that less than one third of domestic payments remain as net farm income, while none of the money from selling crops remains at all. As the following graph illustrates, farmers have become a flow-through channel for government payments.

Gross Farm Income and Net Farm Income 1960-1998



Source: United States Department of Agriculture.

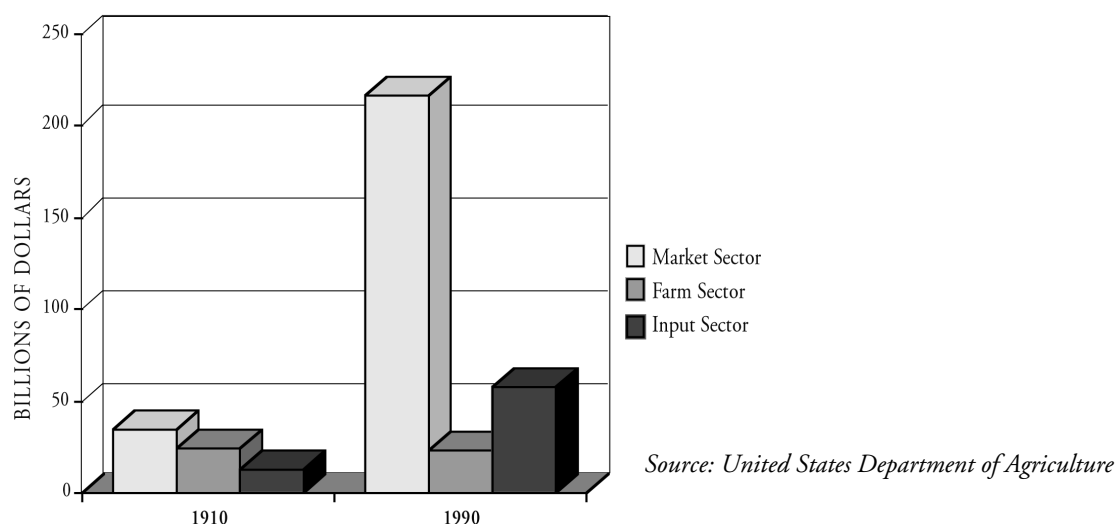
In his series *Policy Matters*, economist Daryll Ray points out that the eight major commodity

⁶³ James M. MacDonald, 2001, "Agribusiness Concentration, Competition and NAFTA", Economic Research Service, US Department of Agriculture, US, p. 22.

⁶⁴ Olson, K. (1999) Mixed News from 1998 Farm Records. In *Minnesota Agricultural Economist*, No. 696 (Spring), University of Minnesota, USA.

almost all of the US\$22.7 billion of direct government payments were tied to those eight crops. In a comprehensive analysis, the Environmental Working Group showed how skewed direct government payments are: “Nationally, over 60 percent of the (farm) payments will go to 10 percent of the recipients...”⁶⁵ The analysis also showed that 60 percent of US farmers receive no subsidy at all.⁶⁶

The principal beneficiaries of public subsidies have been non-farmers: land owners who rent their land rather than risk losing money in production of their own; grain and processing companies, who buy their inputs at less than cost of production prices; and the companies that dominate input supply. As agricultural economist Richard Levins says, “... gross farm income has less and less to do with the net income of farmers in a twenty-first century world.”⁶⁷



The United States will renew its farm legislation in 2002. It seems that many aspects of the programmes will remain unchanged—this, despite enormous criticism, and the testimony and advocacy of many farm organizations as well as consumer and environmental groups that are trying to reverse the perverse effects of unlimited money spent irresponsibly. Farm subsidies, as the U.S. experience suggests, are not a simple transfer from government to producer.

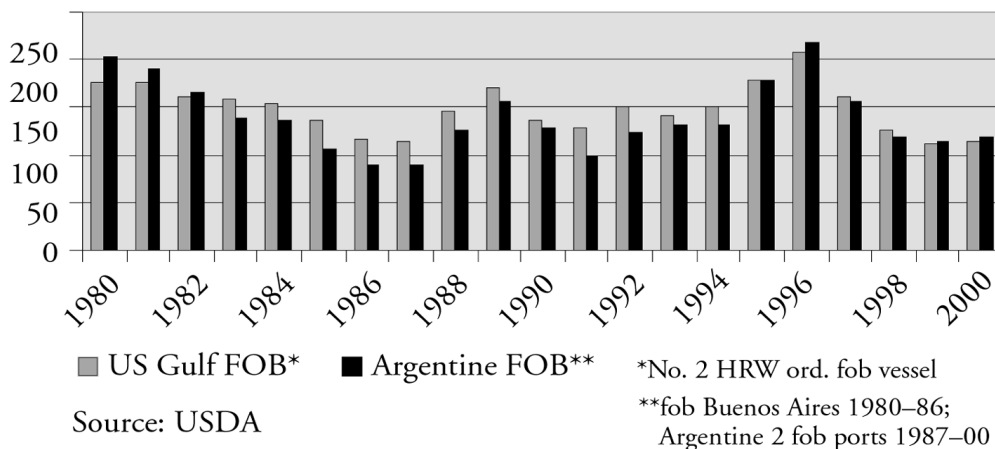
Historically, farm programmes in the United States were based on the understanding that agricultural production had to be managed to ensure a steady supply and to keep farm income stable. The programmes were imperfect, but responded to the economics realities

⁶⁵ Environmental Working Group, 2001, “Another Emergency Bail-Out for Agriculture”, Washington D.C. Online at <http://ewg.org/issues/home.php?i=3>.

⁶⁶ Reported by John Lancaster in *The Washington Post*, January 24, 2002.

⁶⁷ Richard Levins, 2001, “An Essay on Farm Income”, Staff Paper P01-1, Department of Applied Economics, College of Agricultural, Food and Environmental Sciences, University of Minnesota.

U.S. and Argentine Wheat Export Prices: Calendar Years 1980–2000 (in US\$ per MT)



HRW: hard red wheat FOB: free on board

from Dan McGuire, 2001, *"The Structure of World Markets in Wheat, Corn and Rice"*, paper prepared for Institute for Agriculture and Trade Policy, Minneapolis. P. 2. MT stands for million metric tons.

described earlier in the paper related to supply and demand. Supply management, however, does nothing for the grain companies, which wanted to lower the cost of their purchases from farmers and increase the volume of grain shipments worldwide. They have lobbied very effectively for just that.

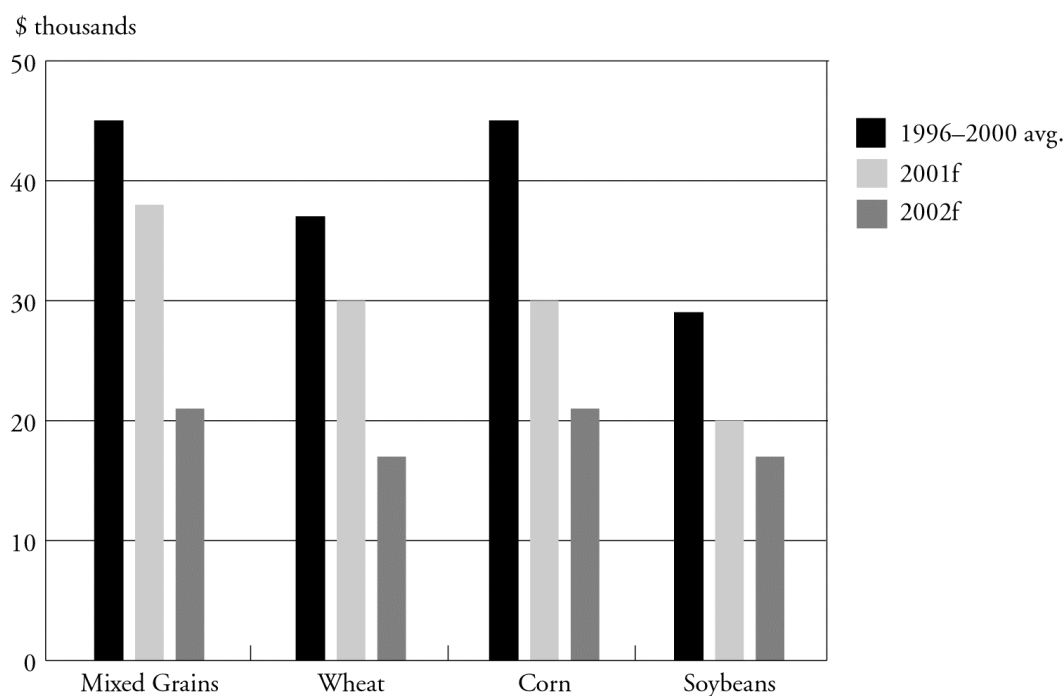
In the late 1950s and early 1960s, the Federal government using the (considerable) cost of managing large stocks as justification, began a deliberate policy of moving farmers off the land and reducing the farm-gate cost of grain by lowering support prices.⁶⁸ Technological changes had anyway been distorting management systems by rapidly increasing the production potential of a given number of acres. With no limits on production, the government was acquiring ever-larger amounts of grain, which was expensive to store and had to be sold at a loss. The government assumed that lower prices would reduce supply, as well as increase demand overseas. Grain companies insisted that U.S. grain needed to be cheaper to compete with other exporters—an argument still made today. In practice, by lowering U.S. floor prices, the U.S. government effectively lowered world prices and so set the bar for all other would-be entrants to the world market. The graph below shows how U.S. and Argentine wheat prices have mirrored each other over the past 20 years.

In practice, the reduced floor prices set by the U.S. government reduced the number of farmers without reducing production. This suited agribusiness; their costs were reduced, and the volume available to trade or process has been stable and even increased.

⁶⁸ Mark Ritchie, 1979, "The Loss of Our Family Farms: Inevitable Results or Conscious Policies?," League of Rural Voters, Minnesota.

Because payments are made to landowners, and not necessarily to the person farming the land, landowners have also benefited from government programmes. (Most farmers own at least *some* land, but most also rent additional land. Many landowners, however, no longer farm at all. In 1993, over 40 percent of land in cultivation in the United States was rented.⁶⁹)

Average net cash income by farm business type: major crops



From USDA, Farm Economy Outlook, January 2002. On-line at www.er.usda.gov/multimedia/farmeconomyjan02

Policy initiatives have been formulated and presented to the public as if farmers were the most economically powerful actors in the farm economy. Yet farmers have next to no choice from which company they buy equipment, seed, pesticide or fertilizer. Nor do they have a choice of buyers for their produce or of haulers for their grain.⁷⁰ Since 1948, the use of off-farm inputs such as inorganic fertilizer and fuel has increased 84 percent, the use of capital has increased 33 percent, while labour as an input has dropped by 70 percent (2.5

⁶⁹ Wunderlich, G. (1993), "U.S. Farmland Ownership: A Century of Change", *Agricultural Outlook*, December 1993, USDA: USA. A recent article in *Choices* shows that in Iowa, only 30.8 percent of farmland is cultivated by an owner-operator alone. "Who Owns Farmland?" *Choices*, First Quarter, The American Agricultural Economics Association, 2000.

⁷⁰ See the National Farmers Union (Canada) paper, 2000, "The Farm Crisis, EU Subsidies and Agribusiness Market Power", for a review of the concentration in Canada. Pp 17-19 of the web version has footnoted references for concentration in the input, processing, transportation and retailing sub-sectors within agriculture. Available on-line at <http://www.nfu.ca/feb17-brief.htm>

percent a year since 1948).⁷¹ All this has diminished the value of agriculture to the local economy and reduced the independence of farmers as businesses. In 1930, many inputs—manure from livestock for fertilizer, horses for power, or seed saved from the last year's harvest for the next—were generated on the farm. Today, many corn and soybeans farmers have become a net drain on local economies: they do not earn enough profit to pay taxes, they need at least one other job off-farm to survive, and their farm purchases are from companies whose production base is out of state, and possibly outside the country altogether.⁷²

Record low prices have led to sales and bankruptcies in the United States, fostering an exodus from farming. Yet many U.S. farmers have responded to successive years of poor prices and the erosion of public price support by turning to new technologies (such as genetically modified crops, some of which reduce the need for labour), signing contracts with corporations that guarantee a price (even if that price remains below the cost of production) and, most importantly, using income from off-farm jobs to stay afloat. Alejandro Nadal describes a similar pattern in Mexico, where maize farmers are barely surviving, but continue to farm, often kept afloat by remittances from family members working abroad.⁷³

The cumulative effect of US agriculture policy, including the acceptance of considerable consolidation in agricultural markets and the emphasis on expanding exports, has been to reduce the economic autonomy of US farmers. The government loan rate, now the production flexibility contract, was designed to be a safety net for years of low prices. Instead it is the *de facto* price in the U.S. market; in fact, it becomes in some commodities the *de facto* world price. The primary beneficiaries have been transnational agribusiness.

It should be noted that the United States has never implemented a fully market-based/liberal farm policy. Having paid lip service to the principle of ending subsidies and supports, the United States has repeatedly reneged on its promises. But that is precisely the point: concentrated market power and concentrated political power make a genuine experiment in reform improbable. Moreover, the peculiarities of agricultural markets combined with the imperative to guarantee the human right to food provide further reasons why a pure neo-liberal model is unworkable.

The reason for persistent low prices needs further analysis. Global stocks to use ratios, used by FAO to measure grain reserves in case of harvest failures, are at low levels by recent

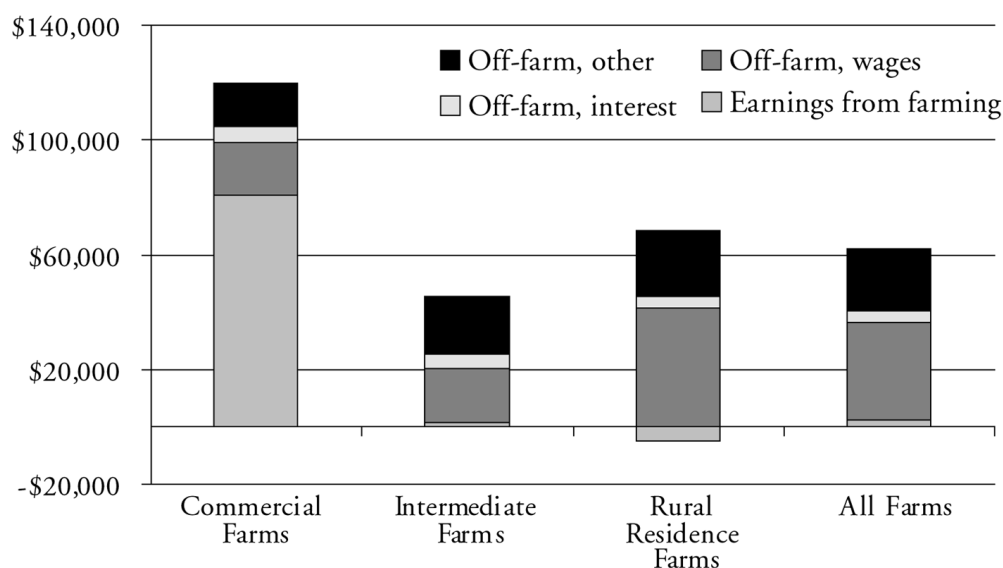
⁷¹ Kevin L. Kliesen and William Poole, "Agriculture Outcomes and Monetary Policy Actions: Kissin' Cousins?" adapted from speech by William Poole to the 2000 ASU Agriculture-Business Conference *Agriculture 2000: Issues and Alternatives*, February 16, 2000.

⁷² Richard Levins, August 1999, "Swift County Agriculture", chapter 1, p. 1. Research Report, Department of Applied Economics University of Minnesota.

⁷³ Alejandro Nadal, 2002, "Zea Mays: Corn in NAFTA Eight Years After", paper presented at North American Commission for Environmental Cooperation meeting, Assessing the Environmental Effects of Trade Liberalization", Montréal, 17-18 January, 2002.

historical standards.⁷⁴ This implies that despite the considerable production increases, use has also been rising—which makes sense given population growth over the last 40 years. So why has diminished supply not been reflected in higher, or at least stable, prices? If production is keeping up with demand, then prices should at least be steady. Instead, wheat and coarse grain prices are declining, as reserves fluctuate but remain relatively low.

Sources of farm operator household income, 2000



(From USDA, *Farm Economy Outlook*, January 2002. On-line at www.ers.usda.gov/multimedia/farmeconomyjan02)

At least part of the answer seems to lie in the market power of transnational agribusiness. How can farmers respond to these pressures? How can governments? What other models for agriculture are possible?

Farmers, Trade and Public Policy: Options to Consider

If farmers in developed countries are struggling, the situation in developing countries is even worse. With less access to credit, information, transportation infrastructure, and with less well-developed markets, their lack of market power is even more pronounced. In its *Rural Poverty Report 2001*, the International Fund for Agricultural Development (IFAD) presents a disturbing view of markets from the perspective of the rural poor in developing

⁷⁴ Reproduced in “The Farm Crisis, EU Subsidies and Agribusiness Market Power”, National Farmers Union (Canada), pp. 28-29, NFU:2000, using USDA data. Also in FAO’s *Food Outlook*, No. 5, December 2001, which shows that ending stocks are down to 16.5 percent of total use, the lowest since harvest shortfalls sent grain prices rocketing in the mid-1990s.

countries.⁷⁵ IFAD lists the interlocking markets that the rural poor depend upon: the market for agricultural products and inputs, for financial services (particularly credit), for assets such as land and water, for labour, and for food and consumer goods. Resource-poor farmers and agricultural labourers enter these markets at a disadvantage. They lack storage capacity, and thus must sell when the harvest comes in—when prices are lowest. They lack capital, and thus must often borrow money at usurious terms at the outset of the planting season, when their resources are scarcest and they most need to invest in seeds and other inputs. These disadvantages are frequently compounded by socio-cultural factors including gender, race, and caste.

Most agricultural policy is enacted in the name of farmers, and farmers are the object of most of the criticism that is made of developed countries farm policies. However, farmers are really the weakest link in the chain. They are price-takers, dependent on highly concentrated industries for their inputs and for the sale of their products. Farmers in Mexico and the Philippines who depend on maize for their livelihoods compete, not with farmers in the United States, but with the companies that export grain to their countries—companies, incidentally, that are the prime beneficiaries of U.S. farm policy. These farmers compete with companies that have an enormous advantage in the global marketplace. As new rules open up more and more local markets in developing countries to import competition, the implications for small-scale farmers around the world are alarming. Popular resistance among developing country farmers to trade liberalization policies as currently practiced is common, from South America to Africa to Asia.⁷⁶

What solutions do farmers have to manage this complex situation? For developing country governments considering how best to respond to their food security needs and their concern to support sustainable livelihoods for their farmers, it is invaluable to have other marketing models to consider. The debate should not be over public/ private ownership but how best we can realize our objectives for agriculture. The following section briefly reviews four areas: the futures and options markets, common in the United States and now promoted for developing country farmers by donor agencies; farmer cooperatives and state-mandated marketing; alternative production and marketing channels; and changes to the global trade rules to better capture and regulate the rapidly changing economic context of the agricultural sector.

⁷⁵ IFAD (2001), *Rural Poverty Report 2001: The Challenge of Ending Rural Poverty*, Oxford University Press: US. Chapter 5, “Markets for the Rural Poor”, provides the overview mentioned here, but the whole report is excellent.

⁷⁶ See for example the statement of La Via Campesina on-line at ns.rds.org.hk/via/theme-food.htm. Via Campesina is an international movement which coordinates peasant organizations of small and middle-scale producers, agricultural workers, rural women, and indigenous communities from Asia, Africa, America, and Europe.

Futures and Options

Futures and options are the names given to the contracts used to manage commodity price risks. A “future” is a legally binding contract to buy or sell a certain amount of a commodity at a pre-determined price for delivery to a specified port at a specific date. An “option” is a contract that allows its owner to buy or sell a specified amount of a commodity at a pre-determined price within a given time period. Both kinds of contracts lock in prices regardless of the prevailing market price at the time of sale (or purchase).⁷⁷

These contracts allow farmers, grain companies, processors and others engaged in commodity trading to hedge the risk of low or high prices at the moment they buy or sell the commodity. For example, a farmer can buy a futures contract in the spring against his or her anticipated harvest the following autumn. If the cash price is lower than the contract price, the farmer has locked in a better price with the contract. If the price at harvest time is higher than that specified in the contract, the farmer has the option to sell the grain in the cash market, and then to buy back the futures contract.

From the buyer’s perspective, the contracts avoid the costs associated with storing commodity—rather than buy physical stocks when prices to buy are favourable, the processor can lock in a price with an options contract. There is a risk of paying more for commodity in the process, but the processor avoids holding stock, guarantees a supply when it is needed, and also has the chance that the contract price will be lower than prevailing cash prices at the time the contract is fulfilled.

Futures and options address price risks: they enable buyers and sellers to lock in prices for a transaction in advance. In turn, this permits both buyers and sellers to plan their finances and manage their business more rationally. These contracts do not address the production risks associated with weather, pest infestations and other factors. Much of a farmer’s risk depends on rainfall at the right time and in the right quantity. Nonetheless, price risk is an important consideration in any producers’ outlook. The UN Conference on Trade and Development (UNCTAD), among others, has done important work to study this question in the context of developing countries.⁷⁸

Futures and options contracts do have drawbacks. In the United States, where support programmes give farmers a strong interest in following market price changes, fewer than half of cotton, maize, soybean or wheat farmers use futures and options.⁷⁹ Producers face

⁷⁷ Elisabeth Cleveland, “Commodity Futures and Options Markets: A Means Towards Food Security?” *Sustainable Food Security Fact Sheet*, No. 7, Institute for Agriculture and Trade Policy: Minneapolis: November 1996.

⁷⁸ See for example, UNCTAD secretariat, “Farmers and Farmers’ Associations in Developing Countries and Their Use of Modern Financial Instruments”, UNCTAD/ITCD/COM/35, Geneva: January 2002. The World Bank has been promoting futures and options as tools for developing country farmers. Their programme can be viewed on-line at www.itf-commrisk.org

⁷⁹ *Ibid.* p. 6.

problems of scale: contracts are often more profitable for quantities of commodities that no single farmer can provide. Access to information and credit is also a problem—to make the contracts useful, farmers must often work through cooperatives or other associations to overcome the disadvantages of size. Even then, farmers can rarely call on the kind of network that transnational agribusiness has at its disposal. For most developing-country farmers, barriers are even greater.

Farmers and others also complain that the prices revealed on the futures trading floor are distorted. These prices reflect a different set of interest than farmers'. Futures and options contracts can be (and are) resold, with the effect that grain is bought and sold on the exchanges dozens of times before it has ripened in the field. The price at any given moment may have more to do with a buyer's financial exposure on other investments than the expected availability of a given commodity for the market at a future date. Many investors in the commodity exchange are not interested in actually owning any product; they are simply looking to make money by reselling the contract for a little more than they paid for it. Investment funds are large players in commodity markets, but their interest is purely speculative.

Transnational agribusinesses have considerable advantages over farmers in buying and selling contracts. First, they have financial departments dedicated to making money much as an investment fund might. UNCTAD reports, "Confident of their analytical skills and under pressure from the declining margins on normal trade, quite a few trading houses have been tempted to increasingly speculate on future market movements."⁸⁰ Moreover, when a company such as Cargill enters into a contract to supply grain, it does so with knowledge of and access to crops around the world. For example, it might contract in April to supply a miller in the Philippines with a certain grade of maize in November. In an enormously complex series of calculations, taking into account maize that might come from any one of a dozen countries and a shipping fleet that is constantly in motion around the globe, the company will estimate what it can supply and at what price. Before it actually delivers any maize into Manila, a company may have bought and sold the maize a dozen times, adjusting its commitments as the market situation evolves. Indeed, this capacity is what makes transnational agribusiness such an efficient supplier of grain around the world.

Farmers buy contracts for very different reasons, under different circumstances. At harvest time, farmers must sell their crop unless they have some provision for storage, which is prohibitively expensive for individual farmers. If the harvest fails, the farmer must meet contract obligations by buying grain elsewhere or by going into debt. Because they lack transportation capacity, contacts, and so on, few individual farmers have access to grain

⁸⁰ UNCTAD, "The Impact Of Changing Supply-And-Demand Market Structures On Commodity Prices And Exports Of Major Interest To Developing Countries", p. 9, UNCTAD/COM.1/EM../2, Report by the UNCTAD Secretariat to the Commission on Trade in Goods and Services, and Commodities. 7-9 July 1999, Geneva.

produced outside of the region where they live. Contracts specify both how much grain is to be shipped and where it is to be delivered; access to transportation is a key element of the transactions.

Farmers are interested in maximizing the difference between their costs of production and marketing, and their profit. For them, it is the profit margin that matters. Grain traders, as discussed above, are more interested in volume. The diversity of their interests makes their calculations quite different from those of farmers. If prices are depressed, as they have been over the past several years, farmers are confronted with contracts that will lock them into prices that cannot make them any money. They must decide whether to take the contracts as offered, or wait in the hopes that prices will rise, thus running the risk that prices will fall even further, increasing their loss.

The World Bank and some other major donors are promoting futures and options contracts as risk-management tools for commodity producers around the world. However, the unequal size of the actors engaged makes it difficult to see how such tools will serve farmers' interests unless the farmers are able to work collectively, and unless the market power of transnational agribusiness is recognized and regulated. As the lysine price-fixing scandal that led to unprecedented fines against Archer Daniels Midland showed, unchecked market power is not merely a theoretical threat.⁸¹ Even U.S. farmers, with relatively easy and affordable access to the Internet, relatively high levels of education and easy access to credit (certainly compared to developing-country farmers), have not found that futures and options offer a solution to the problem of chronically low prices.

Co-operatives

Over time farmers have tried numerous ways to moderate the impact of a market dominated by large grain trading interests. Voluntary cooperative associations have been a popular response. Historically, cooperatives were created to counter the unequal market power that results when a large group of sellers must sell to a relatively small number of buyers. Of course, the solution applies to consumers as well: consumer cooperatives allow consumers to enjoy the benefits of buying products at wholesale prices. Farmers, for their part, have created cooperatives both to reduce input costs (to buy seeds and equipment at lower cost or get credit at lower rates) and to strengthen their position as sellers by increasing the quantity of product available. Sometimes these cooperatives are simply a way to improve prices by offering traders a more reliable supply. In other cases, cooperatives develop into marketing organizations searching for customers in an effort to bypass private traders. Much like trade unions, cooperatives offer a way to realize the bargaining power of a large but diffuse group through coordinated action.

⁸¹ For a detailed view of the lysine price-fixing case, see James Lieber, 2000, *Rats in the Grain*, Four Walls Eight Windows, New York.

In a review of the history of cooperatives in the United States, researcher Emmett Dacey distinguishes businesses from cooperatives by their primary orientation.⁸² Businesses are designed to return profit to their owners and investors. Cooperatives, by contrast, are designed primarily to make available a service to all members that would not be possible on an individual basis. The goal is often to save money, or increase profits for members, but it is also to increase choices. For example, a rotating loan system may not in itself generate a profitable return, but it provides an invaluable financial service to the members of the cooperative.

In New Zealand, farmer-owned marketing organizations enable sales half-way round the world. Cooperatives provide farmers with increased market leverage. Perhaps as important, cooperatives also provide a basis for political organizing.⁸³ For example, in the United States, farmer cooperatives were instrumental to the passage of the 1978 Tax Reduction Act, which increased the investment tax credit for cooperatives.⁸⁴ At the local level, cooperatives offer a form of social organization that help communities face problems collectively, even problems not directly linked the production and marketing of crops.

The U.S. experience, however, demonstrates that cooperatives alone cannot counteract the power of transnational agribusiness. In the face of both horizontal and vertical integration, cooperatives find the services they offer too limited to attract members. As Dacey has shown, the large U.S. cooperatives have tended to become agribusinesses in their own right, either working overseas directly (Land O'Lakes now invests in dairy production in Central America) or signing deals with transnational firms (Archer Daniels Midland has joint ventures with the three farmer-owned cooperatives that number among the top ten largest US grain companies).⁸⁵

The prices paid for grain by cooperatives that compete in an open market reflect overall market prices. Although they may provide some storage capacity to protect farmers from being forced to sell immediately (and thus accept the lowest prices), grain cooperatives cannot afford to pay their members more than the prevailing market prices.⁸⁶ Farmers are thus not attracted to voluntary cooperatives by their price margin. Instead, they are attracted to other services—access to shared storage facilities, or information on the harvest outlook in competing regions.

⁸² Emmett J. Dacey, 2001, "The Virtues And Vices Of Farmer Owned & Controlled Marketing Systems," paper prepared for IATP, Minneapolis, p. 6.

⁸³ *Ibid.*, p. 11.

⁸⁴ USDA, "Cooperative Benefits and Limitations", Ag Coop Service Coop Information Rep. 1, Sec. 3, p. 8.

⁸⁵ Dahl, R. (1998). "Structural Change in the Grain Marketing Industry" in Larson, D., Gallagher, P.W., & Dahl, R., *Structural Change and Performance of the U.S. Grain Marketing System*, p. 118, Ohio State University: USA.

⁸⁶ Emmett J. Dacey, *op.cit.*

Traditional cooperatives in the United States have been able to gain control of the one element most responsible for determining the price of commodities: supply.⁸⁷ But a new wave of cooperatives, known as New Generation cooperatives or New Gen Coops, have begun to use marketing contracts with their producer members to dictate supply. The coop agrees to take a quantity specified by contract—no more, no less. This leaves the farmer facing the same supply risk as with futures and options contracts: if the harvest fails, the farmer must purchase product elsewhere to meet his or her obligation to the cooperative. In many respects, New Gen Coops have taken on the aspect of a private business. Farmers who belong to these cooperatives must invest capital to start the venture; the capital they invest entitles them to shares in the business.⁸⁸ Farmers then enter into contractual obligations to deliver a certain grade and quantity of product to the cooperative.

Cooperatives no doubt offer an important channel for farmer organizing and marketing. They have economic, political and social value. However, on their own, they are unlikely to successfully challenge transnational agribusiness in globalized markets. The very factors that make them attractive and valuable to farmers (and their communities)—local sourcing, collective decision-making, limited membership, being service-based—are the factors that make them uncompetitive in the face of vertically-integrated businesses that own enormous capital reserves, world-wide transportation networks, and storage facilities across the globe.

To have an effect on the price, cooperatives would need to have a monopoly on supply, as the Canadian Wheat Board (CWB) does, to increase the leverage on potential buyers. The CWB, to which we turn next, is an interesting experiment, a hybrid of state and farmer-directed organizing that offers useful points for comparison.

The Canadian Wheat Board

In the wake of the Depression of the 1930s, Canada created a state-mandated grain marketing organization (the Canadian Wheat Board, or CWB) with a monopoly on sales of certain grains.⁸⁹ The CWB is today a major player in world wheat exports. Canada grows only five percent of the world's total wheat production, but supplies 21 percent of the world wheat market. CWB's annual revenues are large, ranging from C\$ 4 to 6 billion (equivalent to about US\$ 2.6 to 4 billion).⁹⁰

The CWB is a legislated monopoly. All farmers in Western Canada must sell their wheat and barley through the board, making it a single-desk seller. Producers in other provinces must sell to provincial boards (notably the Ontario Wheat Board) that work under license from the CWB. The CWB pools its supplies: producers are paid based on the annual

⁸⁷ *Ibid.* p. 12.

⁸⁸ *Ibid.* p.13.

⁸⁹ See the Canadian Wheat Board website for a brief history, www.cwb.ca.

⁹⁰ For more background information, see the CWB website: <http://www.cwb.ca>

returns for the combined product from all producers, pro rated for their contribution. No matter when they sell to the CWB during the year, all farmers will receive the same, averaged price. Farmers are paid a percentage at delivery, based on an estimate of expected prices for the year. Any balance is then paid at the year's end. Pooling spreads the risks of commodity market price volatility and enables the CWB to offer a steady supply to customers, overcoming the mismatch between daily demand and annual harvests.

The CWB has some important features that make it a useful and interesting model. First, it is relatively cheap to operate. Compared to the domestic support programmes used in the European Union or the United States, the Canadian government spends relatively little on its agricultural sector. The government underwrites the risk the Board runs of not being able to deliver on contracts because of harvest failures. Because of the size of the CWB's coverage (and its strong performance as a marketer), this is a small risk. The Canadian government has rarely had spend money to help the CWB because the CWB has over-estimated expected prices. The CWB operates as a non-profit, but pays for itself through its grain sales.

Second, Canadian farmers believe that one of the board's strengths is its ability to "keep the grain traders honest".⁹¹ The restrictions of working with a government-sanctioned monopoly forces the CWB to stay true to its core mandate. The CWB does not have the option of pursuing a vertical integration strategy or of purchasing grain in other countries. These restrictions limit the CWB's potential growth, but they also keep its focus on the farmers who are its primary constituency.

The CWB is undoubtedly challenged by the changes in world grain markets. Many Canadian farmers resent its monopoly on sales of wheat and barley; some farmers would like to have the right to manage at least some of their grain sales privately. Persistent low grain prices undermine the CWB's effort to deliver a price advantage to its members, which traditionally has been one of its primary claims to support.

However, were the CWB to be disbanded, it seems most likely that that the U.S. model of marketing would be extended to include Canada. This would offer little hope of better prices for farmers. At the same time, the loss of the CWB as a competitor in grain sales would undoubtedly reduce competition in the trade significantly. The persistent attacks on the CWB by transnational agribusiness, supported by the US government, are surely in part driven by this commercial reality.⁹² Such an increase in concentration would likely harm both farmers and buyers of grain, such as developing country governments, by further reducing their choice of suppliers.

⁹¹ See annex 1 for a brief summary of interviews with 25 farmers in Manitoba and Ontario.

⁹² US Trade Representative Robert Zoellick recently announced an extension of the deadline for the investigation of the CWB for unfair trade practices. Successive investigations of the CWB by the U.S. General Accounting Office have consistently failed to show discriminatory pricing by the board.

The CWB is a unique experiment. It controls a significant amount of product in the world market. Canada is wealthy and well administered, offering an institutional support structure that limits the possibilities for corruption and keeps the board accountable to the public, and to the farmers it serves. It would be expensive to replicate these conditions in most developing countries. However, the CWB does offer a hopeful example of an alternative to either profit-driven private transnational firms or state monopolies that seek to exact income from agriculture for investment in other sectors of the economy (or worse, to line the pockets of corrupt officials).

Alternative Marketing and Production

U.S. producers are turning to certified organic farming systems as a potential way to lower input costs, decrease reliance on nonrenewable resources, capture high-value markets and premium prices, and boost farm income. Direct markets, such as farmers markets, captured 3 percent of total organic sales to U.S. consumers in 2000.⁹³

A new wave of interest in agro-ecology, organic production, fair trade initiatives and the preservation of traditional knowledge linked to seeds and food production, offers new challenges to mainstream agriculture and provides an alternative to the global market.

The decision to move to organic production is not always or only dictated by environmental concerns. While they may be sympathetic to the objectives and concerns to which organic production responds, many farmers are attracted by the scope for better prices and lower-cost production. Community-supported agriculture initiatives and farmers' markets in both North America and Europe have proliferated. Even in some least developed countries such as Bangladesh attempts are being made to market traditional varieties of cereals produced organically. Consumers are interested in the quality that local, organic production offers, compared to the cost of organic food available in supermarkets, and there is often a price saving too.

The growth of the fair trade movement, affecting tea, coffee, chocolate, sugar and bananas, as well as clothes, has also challenged assumptions about where agricultural production and marketing should be headed. NGOs are working with producer cooperatives to create a product that appeals to consumers (because farmers are guaranteed a fair price and production methods are environmentally sound) and which bypasses mainstream production chains. In the process, enough money is saved to supply a product for retail at a price that is competitive with mainstream foods.

A significant part of this market is related to health concerns, as consumers learn the costs of industrial agricultural production. The Union of Concerned Scientists, a U.S.-based public interest group, estimates 70 percent of all antibiotics used in the United States are fed

⁹³ US Department of Agriculture on-line Briefing Room on Organic Farming and Marketing at <http://www.ers.usda.gov/briefing/Organic/index.htm>

to healthy pigs, poultry and beef cattle.⁹⁴ Public demand is growing for food that is raised humanely and without widespread use of inorganic chemicals or drugs needed for human health.

Cereals, pulses and oilseeds are a less visible part of the food chain than fruits and meat, however. Grains are often only one input in the processed food consumers buy. Moreover, despite the very rapid expansion of organic production, and to a lesser extent, the expansion of fairly-traded products available in the market, sales of organic and fair trade products still make up only a few percent or less of total sales. It is not clear how far they could be scaled upwards without compromising their essential characteristics. Still, as consumers in developed countries grow increasingly uncomfortable with the hidden costs of their “cheap” food, this whole area is likely to continue to grow for the foreseeable future, challenging the dominance of large transnational agribusiness.

Farmers do not often have a lot of choice over where to market their crops. They are limited by transportation options, and the cost of moving a physically bulky product. But they can make choices about what production system to use. This does not change the upstream options, although if the production method chosen is organic, farmers with access to the growing market for these foods in wealthy countries may well be able to command a price premium. What it does change is the input costs, offering an alternative to dependence on off-farm inputs, such as chemical fertilizers and pesticides, and hybrid seeds, which usually require payment up-front, months before the crop can be sold.⁹⁵

The experience of Masipag, a Philippines-based organization, illustrates the advantages that alternative production systems can offer⁹⁶. Masipag is a national network of farmers, scientists, and non-government organizations (NGOs) that set about developing organic rice varieties as an alternative to the high-yielding varieties promoted by the Green Revolution. Emmanuel Yap, Masipag’s executive director, described the advantages of choosing Masipag varieties for the small farmer. Initially, Yap said, the transition to the organic seeds tends to reduce the overall rice yield. However, the immediate savings made by not buying hybrid seeds and the chemical inputs they depend upon offers an initial financial incentive. Within a year or two, as the soil begins to improve with the organic farming methods and farmers learn the techniques required to farm organically, rice yield increases again. On average, Yap claims, Masipag varieties outperform conventional seeds. Simultaneously, the organic

⁹⁴ M. Mellon, C. Benbrook & K.L. Benbrook, January 2001, “Hogging It! Estimates of Antimicrobial Abuse in Livestock”, Union of Concerned Scientists: Cambridge, Massachusetts. On-line at www.ucsusa.org/publications

⁹⁵ Jules Pretty, Director of the Centre for Environment and Society at the University of Essex, has reviewed of the variety of alternative agricultural production systems now in use, and the growth of this sector. His findings are available in a number of books and articles, including the forthcoming, *AgriCulture: Community Reshaping Land and Nature* (2002) and Jules Pretty and H. Ward, 2001, “Social capital and the environment”, *World Development*, 29 (2), pp. 209-227.

⁹⁶ Masipag or *Magsasaka at Siyentipiko para sa Pag-unlad ng Agrikultura* is a network of farmers, NGOs and scientists promoting organic and sustainable agriculture in the Philippines.

methods permit greater production from the same land. For instance, the chemicals used in conventional production kill fish. But because organic farming does not use these chemicals, fish can be re-introduced to the paddies, and farmers gain access to additional sources of protein without extending their landholding.⁹⁷

Similarly, the Thai NGO Rural Reconstruction and Friends Alumni, has done research with rice farmers in Thailand that illustrates the economics of different production systems from the farmer's perspective. This research demonstrated that the highest *gross* income came from hybrid seeds—but the highest *net* income went to farmers using traditional varieties and organic production methods because these farmers saved so much money on input costs.⁹⁸

World Trade Rules

The present structure of the WTO Agreement on Agriculture (AoA) fails to address a central market distortion in global agricultural markets—the market power of agribusiness and the market failures this power entails. Market failure describes situations where the “invisible hand” of the market fails because preconditions for its operation are not in place. Without perfect information and other components of perfect competition, the power of supply and demand to determine the most efficient price breaks down. Often the market remains a very good option to manage prices, because alternatives (for example prices set by the state) are even less efficient. However, market failures associated with excessive market power have been recognized as a significant barrier to efficient market operation for well over one hundred years. The United States has a long history of anti-trust legislation, created and adapted over time to address market power. The problem deserves explicit attention from negotiators at the WTO.

If the current negotiations to revise the AoA simply follow the existing model, with its emphasis on tariffs, export subsidies and domestic support, then the problem of market power will persist and likely grow. Agribusiness will reap much of the benefit arising from the elimination or reduction of government intervention in agricultural markets, while farmers or consumers will lose out. This phenomenon is well documented, as UNCTAD has shown in its work on commodity markets

As to traders, in the first years of liberalization (in developing countries), the roles of the former government marketing boards were generally taken over by a range of local traders.

⁹⁷ Conversation with Emmanuel Yap in Fribourg, Switzerland, October 1999. See also article by Alfred A. Araya Jr., “*Masipag* farmers bring nature back to farming”, *CyberDyaryo*, 20 June 2000, Manila, Philippines. On-line at: http://www.codewan.com.ph/CyberDyaryo/features/f2000_0620_01.htm

⁹⁸ Presentation at workshop organized by Focus on the Global South, IATP, Oxfam GB and ActionAid, “Agriculture and the WTO”, 28-29 September 2001, Geneva.

However, relatively fast, these traders were replaced by international trading companies or their agents.⁹⁹

The issues of concentrated market power and market failure must be part of the agenda for negotiations on agriculture. They affect many of the discussions already on that agenda, including those on food security, rural development and the discussions on elements of special and differential treatment for developing countries.

Other parts of the WTO system could also be used to address these issues. For example, the Trade Policy Review Mechanism, which looks at national level implementation experience of WTO agreements, provides a means to better document the impact of trade liberalization within countries. The legal apparatus of the WTO, including its Dispute Settlement System is also valuable. It allows interpretation of the otherwise very general rules of the AoA. (The AoA will, this time around, reflect a compromise among over 140 member states.)

The following reforms would move multilateral trade rules in the right direction.¹⁰⁰

Information

In light of the considerable market power held by a small number of transnational agribusiness firms, we need to know more about which companies operate where to get a global picture of the scope and scale of their operations. Possible approaches to the problem include:

- Member States are already obliged to complete periodic questionnaires on their State-Trading Enterprises. This system could be expanded to cover transnational companies as well. For example, Member States could be asked to provide information about any company that reaches a certain threshold percentage of either the import or export market in a given agricultural sector. Local companies in joint ventures with transnationals, as well as subsidiaries largely or wholly owned by a transnational, would be included in the survey. The information should be publicly available. In the first instance governments would notify the Committee on Agriculture or the Working Party on State Trading Enterprises.
- WTO staff could be asked to review the market power of agribusiness in the national trade policy reviews they prepare.
- FAO and/or UNCTAD could establish data banks containing comprehensive information on the major players in the world food system. Relevant national

⁹⁹ UNCTAD, "The Impact Of Changing Supply-And-Demand Market Structures On Commodity Prices And Exports Of Major Interest To Developing Countries", p. 5, UNCTAD/COM.1/EM../2, Report by the UNCTAD Secretariat to the Commission on Trade in Goods and Services and Commodities. 7-9 July 1999, Geneva.

¹⁰⁰ The first three of these proposals are a revised version of those included in Sophia Murphy, *Market Power in Agricultural Markets: Some Issues for Developing Countries*, T.R.A.D.E. paper, no. 6, pp. 26-27, South Centre: Geneva. November 1999.

authorities, including anti-trust authorities, should be required to supply the information to these FAO and UNCTAD in a timely fashion. Information in these data banks should be in the public domain. This would facilitate international monitoring of the world food system and would ensure that debate on the relative merits of proposals for reform of trade rules for agriculture would be better informed.

State-Trading Enterprises

The push to prohibit STEs as a form of marketing at the WTO should be reconsidered until the implications of a more globalized food production system are better understood. Different marketing forms may be needed in international grain trading, because of the growing consolidation among grain traders, processors and good retailers. While many STEs have a poor history of serving the public good, the evident market failures in agricultural production and the importance of protecting food security as a public policy priority suggest the role for public oversight in agriculture need rethinking, not abolishing.

Disciplines on Market Structure and Competition in Agriculture

Member States could include rules on competition as part of the revised AoA. One of the evident changes that globalization has brought is to increase the importance investment and competition relative to trade. Developing countries are rightly sceptical of the investment and competition agendas currently under discussion at the WTO because these agendas reflect the interests of the transnational private sectors of the European Union, Japan and the United States. The issues are, however, central to development and must be addressed by the multilateral system in a forum where development, rather than trade expansion, is a central objective.

Food Security and Low-Income Farmers

In the negotiations reviewing the AoA, a number of ideas have been presented whose intent is to address food security concerns as well as agricultural production more generally in developing countries. Many of these ideas have been collected in what is known as the “Development Box,” a proposal discussed in February 2002 by the WTO Committee on Agriculture.¹⁰¹ The Development Box is modeled on the language of the AoA, in which different kinds of policy initiatives are categorized (or put in “boxes”) according to how trade-distorting or vital to non-trade concerns they are. At its core, the Development Box reflects the concern, shared by farmer organizations, NGOs, FAO, the South Centre and many developing country governments, that the current rules reduce vital policy flexibility for the majority of countries that cannot afford to support their agricultural sector with direct payments. The proposed measures include an exemption for staple foods from

¹⁰¹ A collection of documents, governmental and non-governmental, related to the Development Box proposal can be viewed on-line at <http://www.tradeobservatory.org>

minimum import requirements; the right to maintain, and if necessary increase, tariffs as protection against distorted prices on international markets and to safeguard the livelihoods of low-income producers; and a moratorium on further domestic support reduction commitments until developed countries have made very significant reductions in their support levels.

Conclusion

With the best will in the world, trade negotiators cannot hope to anticipate every development with perfect rules. That is why a permanent multilateral trade-negotiating forum, the WTO, was established: to allow trade rules to respond as circumstances change.

As trade negotiators review the existing rules for international agricultural trade, they ought to keep a few central points in mind. First, we must remember why we engage in trade. Trade is a tool that ought to serve the fundamental objective of maximizing human welfare. Human welfare depends on all people having access to a nutritionally adequate diet at all times. Insofar as international trade serves this goal—by increasing the supply of good-quality food at affordable prices; by generating foreign exchange for investment in economic development; by creating livelihoods for people, especially those living in poverty—then it serves our objectives and should be encouraged. Trade, however, is not an end in itself. The goal of increasing trade must not be confused with the goal of increasing human welfare.

Second, we must keep in mind that agricultural economics has distinct characteristics—characteristics not reflected in the assumptions that underlie the Uruguay Round Agreements and the AoA. Among these characteristics is the relative inelasticity of demand and supply. Furthermore, because food is vital to human survival, governments must intervene in the market to ensure that people are able to obtain adequate food; relying on demand is not sufficient to guarantee the human right to food. Public policy is thus an inevitable component of any economic framework for the agricultural sector. While comparative advantage is a powerful model with which to analyse economic activity, it does not address a number of central concerns, including the limits of our natural resource base. Nor does it allow for mobile factors of production, particularly capital, which is transforming economic activity around the globe.

Third, the assumptions in the AoA about agricultural trade in particular are not well supported by empirical experience. Companies trade—not farmers or countries. The globalized food system, that part of the food system that international trade is about, is largely managed by a few enormous private firms.¹⁰² These companies and their practices are at least as significant as the public policies that affect agricultural production and

¹⁰² For example, the world's largest food and beverage company, Nestlé, employs some 225,000 people in about 480 factories worldwide, and sells its products nearly every country in the world. Cargill, the largest private company in the world, had annual sales in 2001 of US\$ 49,408 million.

international agricultural trade, not least because of their influence on the public policies in question, yet the multilateral trade rules ignore them.

Fourth, about 90 percent of agricultural production is for domestic use. The grain that is traded internationally comes from relatively few countries; supplies are dependent on weather patterns, which makes prices volatile. The AoA's emphasis on reducing public stockholding has exacerbated this volatility, and undermines the stated goal of providing reliable and affordable supplies to the developing countries that must import food to feed their people.

Assessments of the Uruguay Round Agreement on Agriculture show that many of the promised benefits of liberalized agriculture have yet to materialize; they may not materialize at all. The promise made to developing countries that the AoA disciplines would end problems such as the dumping of agricultural products at less than cost of production prices in world markets has proven hollow. Analysis of cost of production prices compared to export prices for US wheat, corn and cotton all show that significant levels of dumping persist—up to 30 percent for wheat in 1998, and 20 percent for corn.¹⁰³ This is not simply about export subsidies and high domestic payments to farmers, however. It is the structural result of an agricultural sector where transnational agribusiness have the power to set prices. The level playing field promoted by trade liberalizers will have to include some kind of handicap to ensure that transnational agribusiness pay the real costs for the grain they process, ship and sell. This is precisely the role of public policy, and should be the task assigned to trade negotiators at the WTO in Geneva.

What can farmers do while advocating better international agricultural trade rules? Some of the existing options are important but they are not adequate. Using commodity exchanges to hedge risks will remain out of reach for the vast majority of the world's producers. Collective organizing is important, but cooperatives with a base only in the production side of the agri-food system will continue to face enormous competitive disadvantages against vertically integrated transnational agribusiness. In the longer run, the challenges posed by environmental limits on our resources, especially on land and water, and the need to protect genetic diversity, are providing an incentive for a different model for agriculture. In developed countries, this means a move to create an alternative to the centralized industrial production model that has so many hidden costs. In the developing world, this could be an alternative path for the development of agriculture that avoids the pitfalls of industrial agriculture, and protects a decentralized distribution of the benefits of production.

At the same time, governments need to take on these problems more directly. The current review of the Agreement on Agriculture is an opportunity for change. It is hoped this

¹⁰³ Mark Ritchie, Suzanne Wisniewski and Sophia Murphy, 2000, "Dumping as a Structural Feature of US Agriculture: Can WTO Rules Solve the Problem?", Institute for Agriculture and Trade Policy, Minnesota.

paper has provided a clear argument as to why more of the same will not be enough. We can and must do better.

Annex 1

I. Canadian Farmers Reflect on International Cereals Market and Wheat Boards

As part of the research for this paper, farmers in Canada were asked their perception of international markets and their marketing outlet: the Canadian Wheat Board. Below are the results of that research.

Introduction

In May/June 2001, the staff of the Canadian Foodgrains Bank conducted an informal survey of 25 grain farmers in Manitoba and Ontario to determine:

1. Their level of awareness of the international cereals market
2. Their opinion of the utility of the Canadian and Ontario Wheat Boards in helping them improve their incomes.

The purpose of this survey was not to produce statistically reliable responses to specific questions but rather to determine the breadth of opinions on the nature of international cereals markets and the ability of the farmer to benefit from these markets by choosing various marketing options.

International Cereals Market

The farmers surveyed all see these markets as highly manipulated by national governments (through their agricultural policies) and/or the transnational grain companies. The US agriculture policy is seen as key to determining the international market both because of its large market share and the high levels of domestic subsidies paid.

Most farmers have very limited time available to pursue information on international markets for their produce even though home computers and internet access is common. Only where the large size and high automation of farms make it possible to have a farm member specialize in marketing has it been possible for farmers to relate directly to international markets. Many older farmers and relatively smaller farmers in Western Canada continue to see the Canadian Wheat Board as providing them with an effective means to dealing with international markets.

Marketing Institutions

Farmers are acutely aware of the increasing concentration among grain companies, which they believe will further erode their share of the income from agriculture. There is a widespread belief that fewer companies lead to reduced competition and more potential for collusion to alter markets for the benefit of the grain traders. Farmers generally think that

grain companies still make their profits from the sales margin in the purchase and sale of grain.

The attitude to the Canadian Wheat Board in this context is interesting. Many farmers see the presence of the Wheat Board providing a way to 'keep the grain traders honest' because the Wheat Board operates 'in the farmers' interest'. However, the Wheat Board's monopoly in selling wheat and barley is seen as potentially negative by removing the incentive for the Board to innovate. Several farmers expressed the desire for the Wheat Board's monopoly to be removed, even if only partially. There is a perception that the Wheat Board's monopoly restricts the freedom of farmers.

The Ontario Wheat Board (OWB), which is much smaller than the Canadian Wheat Board, also has a monopoly but provides more flexibility for farmers to sell outside the OWB. Farmers see the OWB operating in their interest, like the CWB, but their greater freedom to choose produces less of resentment about its monopoly.

Farmer Perceptions of the Advantages/Disadvantage of the Canadian Wheat Board

Among the advantages to farmers of the Canadian Wheat Board:

- **Reduced Price Volatility**—by operating on the basis of pooled prices and the system of initial and final payments, the Wheat Board reduces the problems faced by farmers with low prices at harvest time.
- **Finding Buyers**—by having a large staff of salespeople in touch with markets around the world, the Wheat Board is able to find the most lucrative markets.
- **Market Information**—farmers have access to reliable information on future market projections.
- **Controlled Delivery and Price Protection**—farmers like the fact that they can plan their grain deliveries and know approximately what price they will receive.

There are also perceived disadvantages to the Canadian Wheat Board:

- **Restricts Farmers' Options**—the monopoly for the selling of certain grains takes away the farmer's sense of control. All farmers get the same price. Some farmers value the freedom to sell their own grain so highly that they buy it back from the Wheat Board so that they can resell it, presumably with the expectation that they can find an even better price.
- **Non-transparent in Dealings**—some farmers perceive the Wheat Board as too secretive in its sales dealings. The competitive nature of farmer 'buybacks' from the Wheat Board raises suspicions about the prices paid.
- **Lack of Advance Knowledge of Exact Selling Prices**—some farmers resent that they don't know that actual sales price of their grain until long after it is sold.

Farmer Perceptions of the Advantages/Disadvantages of Grain Companies

The grain companies are valued for their transparent self-interest. Farmers perceive various aspects this as advantages.

- **Farmers don't expect the Grain Companies to take care of them**—the grain companies are expected to care primarily about their own profitability.
- **Private sector competitive forces give better services**—some grain companies offer valuable services like soil testing (this may be in conjunction with selling farm inputs).
- **Agricultural Research**—some grain companies fund agricultural research and demonstration plots.
- **Immediate Payment**—grain companies pay for their purchases immediately

The principal misgiving about grain companies comes from their growing concentration and the likely impact on further reduction of farmers' choice.

Wheat Boards in Canada

Historically, grain farmers in Canada have, for the past fifty years, relied on government mandated marketing monopolies (single desk selling agencies) to ensure that international grain sales are made at the highest possible price and that the maximum amount is returned to farmers. This public policy has partly taken the place of the type of domestic support programs offered in the US and Europe as a way to increase farm incomes. In the case of the Canadian Wheat Board (CWB), the single desk selling monopoly currently extends to wheat and barley. All purchases of these commodities originating in Western Canada must be made through the CWB. In 1999/2000, the CWB handled about 25 million tonnes of wheat and 12 million tonnes of barley. The Ontario Wheat Board, which was not established until the 1950s, has the selling monopoly for wheat only and handles much smaller amounts of grain (about 1.2 million tonnes/yr). Recent changes to its constitution allow for farmers to sell up to 15 percent of the annual wheat sales outside the OWB. In these cases, a special licence is issued by the OWB.

II U.S. Farmers Reflect on Local and Global Agricultural Economy

In September of 2001, Dr. Richard Levins and Emmett Dacey of the University of Minnesota interviewed 34 Steele County Minnesota farmers about their attitudes towards the local and global agricultural economy, and the roles of cooperatives and transnational agribusiness.

Introduction

The goal of the questions in the survey was to garner response from agricultural producers—namely family farmers—about their views on the viability of farmer-controlled marketing structures (cooperatives) in light of the changing global agricultural economy.

Methodology

68 Steele County farmers had recently participated in a Business Retention & Enhancement Project survey coordinated by the University of Minnesota, so Steele County seemed a good choice. The past survey could be used to compare results and numbers, allowing a more accurate representation of a broad sample of farmers. On September 6, 2001, surveys were distributed at the Steele County Minnesota Farmers' Union Annual Meeting in Owatonna, Minnesota. 34 were filled out and turned in. This was an older group of farmers, with an average time spent farming of about 38 years. The average farm size was 399 acres. Only 6.5 percent of the respondents farmed only livestock, while almost 40 percent produced just crops. Farmers were not required to answer every question, so percentages reflect just the number answering each question.

Understanding the global market

Over half (53.3 percent) of survey respondents said they were “very interested” in global markets. Only 13.3 percent said they were not at all interested, while 33.4 percent were “somewhat interested.” One farmer commented on the difficulty of understanding the scope of worldwide agricultural trade. In general, farmers seemed sure that what happened globally affected them locally, but their comments reflected a feeling of helplessness. “How come we can't feed the world and get a fair price when doing so?” was one comment. “Family farm future is at stake,” said another. There were several remarks about how trade policies are very important, because a “free global market” either didn't really exist or didn't work to the benefit of the farmers.

Understanding of market institutions

Survey respondents seemed downbeat about the changes occurring in agricultural markets. They saw lack of competition, consolidation, and transnational agribusiness influence on farm policy as dangerous trends. Comments included: “When I first began

there were 18 different elevators within a 60-mile radius; today, there are no independents and only about 8 elevators total, and many are run by the same company.” “Locally there is becoming less place to sell.” “Farm programs are authored by multinational influence.”

Farmers' opinions about market institutions

Survey respondents overwhelmingly preferred dealing with cooperatives when selling their products. Only 14.3 percent said they preferred transnational agribusiness, and 25 percent of those indicated that they had no choice in their area. The farmers that did prefer transnational agribusiness commented that they “can make a better profit with them,” but a good number of the cooperative-preferring farmers said they felt cooperatives paid a better price. Other reasons for choosing cooperatives included intangibles like “appreciation”, fairness, farmer recognition, and the idea that “coops are more stable institutions in the farm community.” Farmers generally felt that cooperatives were farmer-oriented, though growth to a large size impeded this orientation.

The distribution of profits back to members was the most important aspect differentiating cooperatives from transnational agribusiness in farmers' eyes. Several respondents also indicated that cooperatives “work to give you a better price”, while for-profits say “one price, take it or leave it.” However, one farmer said “neither have served farmers very well as far as getting a fair price.” And another commented that he has “gotten ripped off from the big coops also.”

Opinions about cooperatives

Advantages

The perceived benefits of cooperatives fell into two categories: return of profits through dividends and the accountability issue. Keeping local economies strong was a strong undercurrent of the dividends-related answers. “Your stock is reinvested in the community and the business—as a coop—does not leave the community,” said one farmer. “The money stays local and they try to help you,” commented another.

The idea of accountability and responsiveness was important too, with many farmers indicating satisfaction with their cooperatives in this regard. “There is a sense of partnership in dealing with a coop,” “They have some concern about your business,” “I feel my input is heard,” etc.

“Simply that they are farmer owned” summed up a general feeling among respondents that cooperatives were good because of what they meant to farmers—a farmer-owned entity giving them a leg up in the marketplace.

Disadvantages

Most of the disadvantages farmers brought up dealt with non-price issues, so it seems that among this group people were generally happy with the prices cooperatives paid them.

Being slow, inefficient, or poorly run seemed to be a big concern, and a number of respondents indicated that size was a negative factor in terms of accountability. “There are some coops that are so big that the board can’t or doesn’t know what is going on and the manager and his help have full say and not necessarily the members in their minds” was one farmer’s comment that summed up this feeling pretty well. Another said, “Coops have become big business. They don’t really serve their customers anymore. “Some coops have now become producing against us,” complained another, indicating a potential problem when coops vertically integrate in the food production chain.

Opinions about Grain Companies

The Steele County farmers surveyed seemed to have a matter-of-fact attitude toward transnational agribusiness, noting that they were “strictly out to make money for their shareholder.” The for-profits were seen also to “only want the large farm,” and various members of the survey group complained of large local farmers who were getting “subsidized” by contracting with agribusiness firms.

Some farmers believed that grain company influence in the market was extremely powerful—“Cargill runs farm policy,” said one; another believed that the “market is manipulated.”

Advantages to the Grain Companies

Aside from a very small number of farmers who said they generally got better prices when dealing with private agribusiness, there were no advantages noted by those surveyed.

Disadvantages to Grain Companies

The general understanding that transnational agribusiness were “out for themselves,” coupled with the level of control they exerted over local markets, led over 93 percent of farmers surveyed to indicate that lack of competition among buyers of their farm products led to their receiving lower prices.

Expectations for the Future

A general pessimism about the ability of cooperatives to improve the economic well-being of farmers was related in comments like “they are too small to be a good player.” Many saw the trend toward larger farms as an “economic mine field,” citing the problems with contracts and a perceived “lack of individuality” that would inevitably result. “Good luck on that one,” remarked a farmer when asked what could be done to give farmers more economic power.

However, some farmers expressed hope that collective action and organization, through cooperatives or other means, could still turn things around. “Promotion of farm products overseas” was one farmer’s solution. Public policy action was another answer. “Get out of

NAFTA & GATT. Place a moratorium on ag mergers!” exclaimed one farmer. “Get the government out of it,” said another.

“Have farmers stick together more,” suggested a respondent, echoed by another who pronounced “only by working together for power in the market can give us farmers power to control our destiny as farmers to gain profit.”

Bibliography

- Bannock, G., Baxter, R.E., Davis, E. (1992), *The Penguin Dictionary of Economics*, 5th edition, Penguin Books, U.K.
- Blanforth, David, Carter, Colin A., Piggott, R. (1993), *North-South Grain Markets and Trade Policies*, Westview Press, Boulder, U.S.A.
- Butler, Nick (1986), *The International Grain Trade*, St. Martin's Press, New York, U.S.A.
- Cleveland, Elisabeth (1996) "Commodity Futures and Options Markets: A Means Towards Food Security?" *Sustainable Food Security Fact Sheet*, No. 7, Institute for Agriculture and Trade Policy, Minneapolis, U.S.A.
- Dacey, Emmett J. (2001), "The Virtues And Vices Of Farmer Owned & Controlled Marketing Systems," paper prepared for the Institute for Agriculture and Trade Policy, Minneapolis, U.S.A.
- Dias-Bonilla, Eugenio et al (2000), *Food Security and Trade Negotiations in the World Trade Organization: A Cluster Analysis of Country Groups*, Trade and Macroeconomics Division, Paper No. 59, International Food Policy Research Institute, Washington D.C., U.S.A.
- Drèze, Jean and Sen, Amartya (1989) *Hunger and Public Action*, Clarendon Press, Oxford, U.K.
- Eagleton, Dominic (2001) *The International Rice Market: A Background Study*, Oxfam GB, Oxford, U.K.
- Einarsson, Peter (2000) "Agricultural trade policy as if food security and ecological sustainability mattered", a report for Church of Sweden Aid, Forum Syd, the Swedish Society for Nature Conservation and the Programme of Global Studies, Sweden.
- Environmental Working Group (2001) "Another Emergency Bail-Out for Agriculture", Washington D.C., U.S.A.
- European Research Office (2001), "The Future Of The Common Agricultural Policy: Implications For Developing Countries", draft paper, Brussels, Belgium.
- FAO (2000), "Synthesis of the country case studies", *Agriculture, Trade and Food Security*, Vol. II, country case studies, FAO, Rome
- FAO (2001), "Some Issues Relating to Food Security in the Context of the WTO Negotiations on Agriculture", discussion paper no. 1, Round Table On Food Security In The Context Of The WTO Negotiations On Agriculture, Geneva, July 2001.
- Fornari, Harry (1973), *Bread Upon the Waters: A History of U.S. Grain Exports*, Aurora Publishers, Nashville, U.S.A.
- Gilmore, Richard (1982), *A Poor Harvest*, Longman, New York: U.S.A.

Greenfield, Jim, de Nigris, M. and Konandreas, Panos (1996), "The Uruguay Round Agreement on Agriculture: food security implications for developing countries", *Food Policy* vol. 21, No. 4/5, IPC Science and Technology Press, Guildford, U.K.

Heffernan, William with Hendrickson, Mary and Gronski, R. (1999), *Consolidation in the Food and Agriculture System*, Report to the National Farmers' Union, U.S.A. Also updated version, 2002. Both are available on-line at:
www.nfu.org/documents/01_02_Concentration_report.pdf

Hendrikson, Mary et al (2001) "Consolidation in Food Retailing and Dairy: Implications for Farmers and Consumers in a Global Food System", report to the National Farmers Union, U.S.A.

IFAD (2001), *Rural Poverty Report 2001: The Challenge of Ending Rural Poverty*, International Fund for Agricultural Development, Oxford University Press, U.S.A.

Jackson, John H. (2000), *The World Trading System: Law and Policy of International Relations*, second edition, fourth printing, M.I.T. Press, U.S.A.

Jadot, Y. and Thirion M.-C. (1998), "Organisation Mondiale du Commerce et Sécurité Alimentaire en Afrique Subsaharienne", Solagral, Paris, France.

Karier, Thomas (1993), *Beyond Competition: the economics of mergers and monopoly power*, M. E. Sharpe, New York, U.S.A.

Konandreas, P., Greenfield, J. and Sharma, R. (1998), "The Continuation of the Reform Process in Agriculture: Developing Countries' Perspectives", seminar paper, FAO: Rome.

Larson, D., Gallagher, P.W., & Dahl, R. (1998). *Structural Change and Performance of the U.S. Grain Marketing System*, Ohio State University, U.S.A.

Levins, Richard (1999), "Swift County Agriculture", Research Report, Department of Applied Economics University of Minnesota, U.S.A.

Levins, Richard (2001), "An Essay on Farm Income", Staff Paper P01-1, Department of Applied Economics, College of Agricultural, Food and Environmental Sciences, University of Minnesota, U.S.A.

Libby, Ronald T. (1992), *Protecting Markets: U.S. Policy and the World Grain Trade*, Cornell University Press, Ithaca, U.S.A.

Lieber, James (2000), *Rats in the Grain*, Four Walls Eight Windows, New York, U.S.A.

MacDonald, James M. (2001) "Agribusiness Concentration, Competition and NAFTA", research paper, Economic Research Service, US Department of Agriculture, U.S.A.

McGuire, Dan (2001) "The Structure of World Markets in Wheat, Corn and Rice", paper prepared for Institute for Agriculture and Trade Policy, Minneapolis, U.S.A.

Madden, P. and Madeley, J. (1993), *Winners and Losers: The impact of the GATT Uruguay Round on developing countries*, Christian Aid, London, U.K.

- Mellon, M., Benbrook, C. and Benbrook, K.L. (2001), "Hogging It! Estimates of Antimicrobial Abuse in Livestock", Union of Concerned Scientists: Cambridge, Massachusetts, U.S.A. On-line at ww.ucsusa.org/publications
- Mellor, John W., "Reducing Poverty, Buffering Economic Shocks – Agriculture and the Non-tradable Economy", background paper prepared for Experts' Meeting, 19-21 March, 2001, Roles of Agriculture Project, FAO: Rome.
- Michelmann, Hans J., et al (2001), *Globalization and Agricultural Trade Policy*, Lynne Rienner, Boulder, U.S.A.
- Morgan, Dan (1980), *Merchants of Grain*, Penguin Books: U.K.
- Murphy, Sophia (1999), *Market Power in Agricultural Markets: Some Issues for Developing Countries*, T.R.A.D.E. paper no. 6, South Centre, Switzerland.
- Murphy, Sophia (2001), *Food Security and the WTO*. International Cooperation for Development and Solidarity (CIDSE). Belgium.
- Nadal, Alejandro (2000), *The Environmental and Social Impacts of Economic Liberalization on Corn Production in Mexico*, Oxfam GB (U.K.) and WWF International (Switzerland).
- National Farmers Union (2000), "The Farm Crisis, EU Subsidies and Agribusiness Market Power", NFU, Saskatoon, Canada.
- Pretty, Jules and Ward, H. (2001), "Social capital and the environment", *World Development*, 29 (2), Pergamon Press, Oxford, U.K.
- Ray, Daryll *Policy Matters*, series produced from the University of Tennessee, Knoxville. Available on-line at <http://apacweb.ag.utk.edu>
- Ritchie, Mark (1979), "The Loss of Our Family Farms: Inevitable Results or Conscious Policies?" League of Rural Voters, Minnesota, U.S.A.
- Ritchie, Mark, Wisniewski, Suzanne and Murphy, Sophia (2000) "Dumping as a Structural Feature of US Agriculture: Can WTO Rules Solve the Problem?" Institute for Agriculture and Trade Policy, Minnesota, U.S.A.
- Rodrik, Dani (2001), "The Global Governance of Trade as if Development Really Mattered", UNDP Background Paper, U.S.A.: October 2001.
- Rostow, Walt Whitman (1960), *The Stages of Economic Growth*, Cambridge University Press, U.K.
- Sarris, Alexander (1998) "Price and Income Variability," OECD Workshop on Emerging Trade Issues in Agriculture," Organization for Economic Cooperation and Development: Paris, France.
- Scoppola, Margherita (1995), "Multinationals and agricultural policy in the EC and U.S.A.," *Food Policy*, Vol. 20, No. 1, IPC Science and Technology Press, Guildford, U.K.
- Sharma, R., Konandreas, P. and Greenfield, J. (1996), "An overview of assessments of the impact of the Uruguay Round on agricultural prices and incomes", *Food Policy* vol. 21, No. 4/5, IPC Science and Technology Press, Guildford, U.K.

Smith, Adam, "Digression concerning the corn Trade and Corn Laws", chapter V, book 4, *An Inquiry into the Nature and Causes of the Wealth of Nations*, first published 1776.

Stumo, Michael C. (ed.) (2000), *A Food and Agriculture Policy for the 21st Century*, Organization for Competitive Markets, Nebraska, U.S.A.

Timmer, C. Peter (1986), *Getting Prices Right: The Scope and Limits of Agricultural Price Policy*, Cornell University Press: Ithaca, U.S.A.

UNCTAD (1999) "The Impact Of Changing Supply-And-Demand Market Structures On Commodity Prices And Exports Of Major Interest To Developing Countries", Report by the UNCTAD Secretariat to the Commission on Trade in Goods and Services, and Commodities. 7-9 July 1999, Geneva. Document reference: UNCTAD/COM.1/EM/2.

UNCTAD (2002), "Farmers and Farmers' Associations in Developing Countries and Their Use of Modern Financial Instruments", document reference: UNCTAD/ITCD/COM/35, Geneva, Switzerland.

Watkins, K. (1991), *The World Agricultural Trade Crisis and the Uruguay Round: Implications for the South*, CIIR, London, U.K.

Wunderlich, G. (1993), "U.S. Farmland Ownership: A Century of Change", *Agricultural Outlook*, December 1993, US Department of Agriculture, U.S.A.

Internet Hot Linked Resources

**The internet references below are set up as hot links.
If you are online, just click on them to activate.**

URLs:

Canadian Foodgrains Bank: www.foodgrainsbank.ca/
Institute for Agriculture and Trade Policy: www.iatp.org
and
IATP's library of trade-related documents. www.tradeobservatory.org

Inter-governmental and national organizations mentioned in report:

UN Food and Agriculture Organization www.fao.org
International Fund for Agriculture and Development www.ifad.org
International Food Policy Research Institute www.ifpri.org
UN Conference on Trade and Development www.unctad.org

US Department of Agriculture www.usda.gov

BIBLIOGRAPHY LINKS

Included on this CD Rom:

Dacey, Emmett J. (2001), "The Virtues And Vices Of Farmer Owned & Controlled Marketing Systems," paper prepared for the Institute for Agriculture and Trade Policy, Minneapolis, U.S.A.

Ritchie, Mark, Wisniewski, Suzanne and Murphy, Sophia (2000) "Dumping as a Structural Feature of US Agriculture: Can WTO Rules Solve the Problem?" Institute for Agriculture and Trade Policy, Minnesota, U.S.A.

On the Web:

Environmental Working Group (2001) "Another Emergency Bail-Out for Agriculture", Washington D.C., U.S.A. On-line at <http://www.ewg.org/reports/farmfairness>

FAO (2001), "Some Issues Relating to Food Security in the Context of the WTO Negotiations on Agriculture", discussion paper no. 1, Round Table On Food Security In The Context Of The WTO Negotiations On Agriculture, Geneva, July 2001.
[On-line at http://www.fao.org/trade/index.asp?lang=en](http://www.fao.org/trade/index.asp?lang=en)

Heffernan, William with Hendrickson, Mary and Gronski, R. (1999), *Consolidation in the Food and Agriculture System*, Report to the National Farmers' Union, U.S.A.

Also updated version, 2002.

Both are available on-line at: www.nfu.org/documents/01_02_Concentration_report.pdf

IFAD (2001), *Rural Poverty Report 2001: The Challenge of Ending Rural Poverty*, International Fund for Agricultural Development, Oxford University Press, U.S.A. On-line at <http://www.ifad.org/poverty/index.htm>

Levins, Richard (2001), “An Essay on Farm Income”, Staff Paper P01-1, Department of Applied Economics, College of Agricultural, Food and Environmental Sciences, University of Minnesota, U.S.A. On-line at <http://agecon.lib.umn.edu/mn/p01-01.pdf>

Mellon, M., Benbrook, C. and Benbrook, K.L. (2001), “Hogging It! Estimates of Antimicrobial Abuse in Livestock”, Union of Concerned Scientists: Cambridge, Massachusetts, U.S.A. On-line at www.ucsusa.org/publications

Murphy, Sophia (1999), *Market Power in Agricultural Markets: Some Issues for Developing Countries*, T.R.A.D.E. paper no. 6, South Centre, Switzerland. On-line at <http://www.southcentre.org/publications/agric/toc.htm>

Murphy, Sophia (2001), *Food Security and the WTO*. International Cooperation for Development and Solidarity (CIDSE). Belgium. On-line at <http://www.cidse.org/pubs/tg1posfoodsecwto2001.htm>

Nadal, Alejandro (2000), *The Environmental and Social Impacts of Economic Liberalization on Corn Production in Mexico*, Oxfam GB (U.K.) and WWF International (Switzerland). Available on-line at <http://www.oxfam.org.uk/policy/papers/lpapers.htm>

National Farmers Union (2000), “The Farm Crisis, EU Subsidies and Agribusiness Market Power”, NFU, Saskatoon, Canada. On-line at <http://www.nfu.ca/feb17-brief.htm>

Ray, Daryll *Policy Matters*, series produced from the University of Tennessee, Knoxville. Available on-line at <http://apacweb.ag.utk.edu>

About the Author

Sophia Murphy is the director of the Institute for Agriculture and Trade Policy's Trade and Agriculture Program. She directs IATP's international trade work focusing on multilateral institutions and food security. She is a former Policy Officer at the United Nations in Geneva, Switzerland, and before that she was a Policy Officer at the Canadian Council for International Co-operation in Ottawa. She is a graduate of Oxford University and the London School of Economics. She has written frequently on food and trade issues and has spoken to many international panels on these topics—most recently at the United Nations Conference on Financing for Development in Monterrey, Mexico.