

Trade Liberalization of the International Oilseed Complex

Economic & Policy Analysis Directorate
Policy Branch

July 1998

TRADE LIBERALIZATION OF THE INTERNATIONAL OILSEED COMPLEX

Economic and Policy Analysis Directorate
Policy Branch

July 1998

TRADE LIBERALIZATION OF THE INTERNATIONAL OILSEED COMPLEX

This publication was authored by *Karl D. Meilke* of the University of Guelph and *Mitch Wensley* of Agriculture and Agri-Food Canada.

Economic and Policy Analysis Directorate
Policy Branch

July 1998

To obtain additional copies, contact:

Information Production and Promotion Unit
Economic and Policy Analysis Directorate
Policy Branch
Agriculture and Agri-Food Canada
Ottawa, Ontario
K1A 0C5
Tel: (613) 759-7443
Fax: (613) 759-7034
E-mail: ipp@em.agr.ca

Electronic versions of EPAD publications are available on the Internet at www.agr.ca/policy/epad

Publication 1973/E
ISBN 0-662-26988-8
Catalogue A22-174/1998E
Project 98033wp
Contract 01B04-7-C013 (rep: Merritt Cluff)

Aussi disponible en français sous le titre :
*"Libéralisation du commerce du marché
international des oléagineux"*

Table of Contents

Preface	i
Executive Summary.....	iii
Introduction.....	1
Background	3
Methodology	5
Results.....	9
Conclusion.....	17
Bibliography.....	19
Appendix: Applied and Effective Tariffs by AGLINK Region.....	21

Preface

This report is part of the Trade Research Series that Agriculture and Agri-Food Canada (AAFC) is undertaking to support discussions in connection with multilateral and bilateral trade negotiations. The purpose of the series is to create an inventory of research that will make it easier for stakeholders to identify concerns, issues and opportunities associated with such discussions. The research is for the most part directed to areas in which little or no information has been circulated rather than to areas in which a broad base of literature already exists. More information on the Trade Research Series is available on the AAFC website at www.agr.ca/policy/epad, or by contacting Brian Paddock, Director of the Policy Analysis Division, Policy Branch (e-mail: Paddobr.em.agr.ca, phone: (613) 759-7439).

This report is a joint undertaking by the Policy Branch and the Market and Industry Services Branch of AAFC, in conjunction with a team of representatives from the Canadian oilseed industry. Professor Karl Meilke from the University of Guelph was engaged as a consultant to conduct the analysis. This report summarizes the main findings. A separate Technical Paper, which caters to a more technical audience, is also available in this Trade Research Series.

The report has made use of the AGLINK commodity model which was developed by the Secretariat of the Organization for Economic Cooperation and Development (OECD). The OECD Secretariat wishes to note to readers of this document that:

“...the Secretariat can not be held responsible for results obtained from applications of the (AGLINK) model, or derivative versions of the model, by outside individuals. The results of any analysis based on the use of the AGLINK model by parties outside the OECD are not endorsed by the Secretariat. It would therefore be

inappropriate for outside users to suggest or to infer that these results, or interpretations attached to these results, can in any way be attributed to the OECD Secretariat or to the Member countries of the Organisation."

Executive Summary

Trade and domestic policy reform has been a recent defining feature of world agriculture and food markets. One approach to trade liberalization, demonstrated during the Uruguay Round of multilateral trade negotiations, was the zero-for-zero sectoral approach which involved agreements to eliminate export subsidies, import tariffs and export taxes in a number of sectors. During the Uruguay Round, a zero-for-zero proposal for oilseed and oilseed products was made. The zero-for-zero proposal received reasonably strong support, although it was not adopted. This paper reviews the findings of an independent study which used a modified version of the Organization for Economic Co-operation and Development (OECD) AGLINK model to conduct an assessment of the impact of complete border trade liberalization on oilseed and oilseed product trade.

The analysis suggests that, under all of the scenarios examined, Canada's oilseed crushers and oilseed producers would gain from trade liberalization. The exact size of these gains depends on the number of countries that participate in trade liberalization and on the sensitivity of Canadian crush demand to changes in the crushing margin. The results suggest that Canada, along with several other developed countries and some less developed countries, would gain from the adoption of the zero-for-zero proposal.

Introduction

Trade and domestic policy reform has been a recent feature of world agriculture and food markets. While previous General Agreement on Tariffs and Trade (GATT) rounds were not successful in bringing agriculture under trade rules and disciplines similar to those for manufactured products, the Uruguay Round began the process of normalizing trade in agri-food products. The question remains how to continue making progress in reducing barriers to trade in agri-food products.

An approach to trade liberalization demonstrated during the Uruguay Round was the zero-for-zero sectoral approach which sought agreement to eliminate export subsidies, import tariffs and export taxes in a number of sectors. Several zero-for-zero agreements, in industries such as pharmaceuticals, medical devices, pulp and paper and allied paper products were reached during the Uruguay Round negotiations. The zero-for-zero approach was also used in negotiations conducted as part of the Singapore Ministerial Conference in December 1996. Agreements were reached for information technology products (ITA) and some World Trade Organization (WTO) member countries added more than 400 goods to their lists of tariff-free products in the pharmaceutical sector. While limited zero-for-zero initiatives in the agriculture and food sector were pursued at the Singapore Ministerial Conference, a bilateral arrangement between the United States and the European Union was concluded to eliminate tariffs on white distilled spirits.

During the Uruguay Round, a zero-for-zero proposal for oilseed and oilseed products was developed. The zero-for-zero proposal received reasonably strong support, although it was not adopted. Given this, what are the prospects for this proposal in future negotiations? Canadian oilseed producers and processors voiced their common support for the proposal as did their counterparts in the United States.¹ As one of the sectors in agriculture which is

least affected by government intervention, the oilseeds sector may set an example for international policy reform.² In this context, prior to the 1999 agricultural negotiations to be conducted under the WTO, it is important to deepen the understanding of what the zero-for-zero proposal means for Canadian oilseed and oilseed product producers.

The purpose of this paper is to review the findings of an independent study conducted to assess the impact of trade liberalization on oilseed and oilseed product trade. The assessment provides quantitative measures of possible impacts which help to weigh the benefits, costs and difficulties of the proposal. The concept of significantly liberalizing trade in some sectors, which are by and large less protected, may serve as a bridgehead in the negotiation process. The exact sectors which are candidates for inclusion depends on the difficulties which are placed on certain countries by the liberalization process. While the research reviewed assesses tariff/export competition issues, it ignores the influence of technical barriers to trade as well as those that may arise as a result of non-contestable markets. The analysis was undertaken using a modified version of the OECD AGLINK model. The key questions regarding liberalization that were addressed by the analysis included:

- What are the impacts on prices of oilseeds and oilseed products?
- What are the impacts on the supply and disposition of oilseeds and oilseed products for Canada, and for major consumers/competitors in the market place?
- What are the income effects, by country, on primary producers and processors?
- What are the impacts on the economics of oilseed crushing in Canada and in competing countries, in terms of quantities and crushing margins for different types of oilseeds?
- What are the critical policies in different countries, and in particular, what critical mass of change is required before the adoption of the proposal is significantly advantageous?
- What would be the additional impact of extending the proposal to reduce domestic subsidy support to zero?

-
1. Canadian producers and processors wrote a letter to then Minister of Agriculture and Agri-Food, the Honourable Ralph Goodale, June 1996. American producers and processors wrote to Mr. Kantor in April 1996.
 2. The world market for oilseeds and oilseed products is thought to be one of the least protected and distorted of the agricultural commodity markets (OECD, 1994). In addition, policy changes including the EU's implementation of the Blair House Agreement and Brazil's elimination of differential export taxes are examples of significant reductions in government distortions in the oilseed and oilseed product markets.

Background

In almost any terms, oilseed and oilseed products are significant commodities in the domestic and international market place. Since the 1960s, world oilseed production has grown more rapidly than wheat production. In the 1990s, the annual growth rate of major oilseed production is approximately 3% per annum, compared to 2% per year for wheat. The rapid expansion of world oilseed production over the past decade has been encouraged by relatively depressed coarse grain and wheat prices and a rapidly increasing demand for oilseed based products. With considerable past and prospective yield growth on the supply side, and with demand characteristics linked to more income elastic products, the outlook for oilseeds is positive, relative to many other major crops.

The five major oilseeds produced in the world are soybeans, cottonseed, rapeseed/canola, peanuts, and sunflowerseed. In Canada, where canola, soybeans and flaxseed are the major oilseeds, it is the interaction among the world soybean, rapeseed/canola and sunflower seed markets and their products, along with the palm oil market, that most directly influences the Canadian oilseed industry. Note that minor crops may have a significant influence on regional and world markets in some years.

In recent years, about 80% of the world demand for oilseeds has come from the crushing industry. Oilseed demand from the crushing industry is driven by the profitability of producing the joint oil and meal products from the various available oilseeds. Profitability is largely a function of the gross crushing margin (value of oil and meal minus the cost of seed) which is determined by market conditions in each of the two distinct output markets and the individual seed markets.

Price formation for oilseeds and oilseed products represents one of the more complex processes in price discovery among agricultural commodities. Seeds with different characteristics, and whose oil and meal products have different attributes, substitute for each other in the production of a wide variety of final products for both direct human consumption and consumption indirectly through other goods (especially animal feeds). As noted, prices of oilseeds reflect the relative values of their meal and oil products. Prices of meals reflect their demand and competitive position as a protein source, and vegetable oils reflect their demand and competitive position relative to animal fats and other oils.

The price of oil, meal, and seed, as well as meal and oil crushing yields, determines the gross crushing margin. The profitability of crushing is heavily dependent on this margin, in addition to other local costs. In the longer term, prices of oilseeds and their products find an equilibrium in each country in relation to world markets which reflects market forces, after accounting for intervention measures.

Tariffs, export subsidies and taxes affect the internal prices for a given commodity, relative to the external price. In theory, the levels of these instruments for soybean, rapeseed, sunflower, and palm oil and their products can be expected to have a complex effect on market prices for each of the products, and on the trade and production levels among countries. In practice, much depends on the actual levels of tariffs and trade patterns. The effects of these instruments are also affected by trade positions, and potentially by the presence of state trading enterprises, and/or large corporations which may exert influence on price through market power.

Factors affecting market prices have implications for the location of crushing facilities and for associated trade flows of oilseeds and their products. Oilseed crushing is important to most nations since it is a value added activity. Price distortions, caused by border measures which influence the location of oilseed processors, are of concern. Further, the structure of crushing operations also indicates growing firm sizes and the presence of large multinational companies; hence, the location of crushing operations will likely have implications for investment flows.

Methodology

In undertaking this analysis¹, the OECD's AGLINK model was chosen to evaluate the impact that the removal of border measures would have on the international oilseed complex. The model was modified to provide a more comprehensive analysis of the liberalization initiative. Modifications included the addition of palm oil, to more fully represent the vegetable oil market and the disaggregation of the "rest of world" (ROW) region to specifically identify three countries (Brazil, Argentina and China) that are major players in the world oilseed complex. While considerable thought was given to the level of commodity aggregation (soybean, rapeseed and sunflower seed are treated as a single aggregate in the model) and its potential impact on the empirical results, the current level of aggregation was maintained.

While numerous policies are in place internationally, it was only those which provide some effective rate of protection to the domestic industry that were incorporated into this analysis. For instance, many countries have import tariffs on products, but they are net exporters of these products. Tariffs for net exporters do not provide measurable protection. In the appendix, applied tariffs (taken from a variety of sources) and effective tariffs as determined by the average net trade position over the 1992 to 1995 period, are identified.

The analysis of the zero-for-zero proposal was conducted over an adjusted baseline which took as its starting point the data provided in the 1996 OECD outlook cycle.² The analysis involved comparing a future baseline where effective tariffs remain in

-
1. For the complete analysis, see Meilke and Swidinsky (1998).
 2. Since the AGLINK model was adapted to separate Brazil, Argentina and China from the ROW aggregate, it was necessary to reflect the different data used for the ROW region and the projected baselines for the new regions.

place with an AGLINK simulation where tariffs are removed. While the analysis addresses the impact of removing visible tariffs, it ignores the incremental importance that non-tariff barriers would assume in such a situation. It also ignores the effects that liberalization in other sectors might have on oilseed markets; this in particular holds for the possible accession of China to the WTO or the implementation of the EU's Agenda 2000.

Applied tariffs and tariff reduction schedules for the period 1996 to 2001 for countries and regions in the modified AGLINK model were analysed and adapted for use in the model (See Appendix on page 21). Currently, export subsidies are not applied anywhere. Only Argentina maintains an export tax on seed (3.5%) and an export rebate on oil (1.35%). Analysis shows that considering effective tariffs and other border measures, the rate of protection affecting world oilseed markets is not high, judged by the rate of protection for many agricultural commodities. In fact, the rate is small for oilseeds themselves and their meals. Vegetable oil is the most protected of the oilseed products. In OECD countries, palm oil appears relatively less protected, but in many non-OECD countries palm oil tariffs appear larger than for vegetable oils. Effective protection of oilseed meal and of oilseeds themselves is not common, with the exception of the ROW where India's tariff structure implies a negative effective rate of protection for crushing. The so-called effective tariff surface shows spikes for China, Japan, and ROW. The ROW region is dominated by India, where soybeans are heavily protected.

Several simulations were performed with the adjusted AGLINK model. One simulation is a "baseline" projection over the period 1996 to 2001, which corresponds closely with that provided by the OECD's Agricultural Outlook (March 1997). The main alternative simulation performed was the zero-for-zero analysis in which all oilseed and oilseed product tariffs and export taxes, and palm oil tariffs were set to zero in 1996. This simulation shows the impact of the zero-for-zero proposal over the five-year period to 2001. A number of other simulations have been examined to explore more fully various aspects of potential trade liberalization scenarios, and features of the model used for the analysis.¹ In addition to the full zero-for-zero analysis two other configurations are examined in this paper. One is a full zero-for-zero simulation which excludes tariff reductions by China and Japan. A second examines the importance of excluding the ROW from the zero-for-zero agreement.

1. See Meilke and Swidinsky (1998).

Before moving on to the results of the analysis, the theoretical impacts expected from tariff removal are reviewed. A theoretical analysis of the effects of tariff reduction in a market such as that for oilseeds in which there are two joint products points to several fundamental results. For instance, in a two-region, one-crop, two-joint product world, the following results can be anticipated¹:

A tariff on oilseeds:

- increases the price of seed in the importing country and reduces the price in the exporting country.
- increases the processing of seed in the exporting country and reduces the processing of seed in the importing country.

A tariff on oil or meal:

- increases the price in the importing country and reduces the price in the exporting country.
- increases the processing of oilseed in the importing country and reduces processing in the exporting country.
- produces an ambiguous effect on the price of oilseeds.
- produces an ambiguous effect on the price of the other joint product.

The effect of an export subsidy can be expected to have the inverse effect of a tariff. The empirical assessment of the zero-for-zero proposal is largely concerned with the last two effects noted. The ambiguity arises from differing economics of demand and supply for seed, meal and oil in the respective regions. The observation that it is vegetable oil prices which are the most influenced by tariffs also provides a focus for the assessment.

1. A more detailed analysis of the anticipated effects can be found in Meilke and Jay (1997).

Results

This section addresses the key questions presented in the introduction. It is important to recognize that the results are subject to the limitations of using this type of model as well as the assumptions underlying the baseline. While the magnitude of the results are sensitive to the estimated and assumed parameters in the model, the general direction of the results are consistent. A more detailed review of the limitations, assumptions and sensitivity of the results to various assumptions can be found in Meilke and Swidinsky (1998).

What are the impacts on prices of oilseeds and oilseed products?

As shown in Table 1, the price impacts indicate an increase in the world vegetable oil price of about 6%, and a rise in the meal price of just under 2%; the average effect on seed prices is an increase of 2%, but for each country the exact increase depends on the seeds' relative content of oil and meal – soybean prices are expected to rise, but not by as much as rapeseed and sunflower seed prices because of their lower oil content. The price effect on vegetable oil prices is largely influenced by oil tariffs in Japan, China and the ROW. The size of the “cross” effects with palm oil are also important. The palm oil price rises more than that for vegetable oils because its average effective tariff rate is larger.

The simulation results also indicate modest effects on other sectors. In the full zero-for-zero simulation, both wheat and coarse grain prices increase 1% given their cross price effects in feed grain rations with oilseed meals. This feed price effect passes through to the beef and pork markets where prices increase 0.4% and 0.5%, respectively. The results also indicate a rise in the world indicator price for skim milk powder of 1%, and curiously a 3% decline for butter. The latter effect results from the fact that the ROW region is critical for the determination of the world butter price given the closed nature of developed country markets, and in this region, the vegetable oil price falls as a result of the tariff decline.

Table 1: Full zero-for-zero scenario: price impact in 6th year (%)

Country/Region	Oilseed	Oilseed Oil	Oilseed Meal	Palm Oil
World	2.1	6.4	1.6	9.8
Argentina	6.0	6.5	1.4	9.8
Australia	1.3	1.3	1.6	9.8
Brazil	2.3	5.0	1.4	-0.1
Canada	3.1	6.2	1.6	3.2
China	2.3	-10.6	1.4	0.8
European Union	2.2	6.2	1.5	4.6
Japan	2.1	-10.3	1.5	9.8
ROW	-7.8	-9.6	-3.8	-4.0
United States	2.3	5.0	1.4	9.8

Note: Percentage changes in oilseed and oilseed product prices.

What are the impacts on the supply and disposition of oilseeds and oilseed products for Canada, and for major consumers/competitors in the market place?

Table 2 shows that the removal of all tariffs results in declines in vegetable oil consumption in all regions except China, Japan and the ROW. The largest consumption decline is in Argentina (-2.0%) and the largest increase is in Japan (+2.0%). Vegetable oil consumption in the ROW increases by 1.9% as a result of the tariff removal, and by 1.6% in China.

The results for oilseed meal consumption are similar to those for oil. Consumption of oilseed meal declines in all regions except Brazil, China and the ROW. Most of the changes are small, with the largest change being a 1.5% increase in oilseed meal consumption in the ROW.

The results for oilseed crushing are interesting and varied. The largest decline in oilseed crush is in Japan (-24.3%). Declines in oilseed crushing are also evidenced in China (-13.9%) and Argentina (-3.2%). Oilseed crushing activity increases in all other regions with the largest increase occurring in Canada where crush increases by 7.2%.

Changes in oilseed production tend to be small and production declines only in the ROW (-3.0%). Production increases are the largest in Canada (1.8%) and Brazil (1.3%).

Table 2: Full zero-for-zero scenario: quantity effects (%)

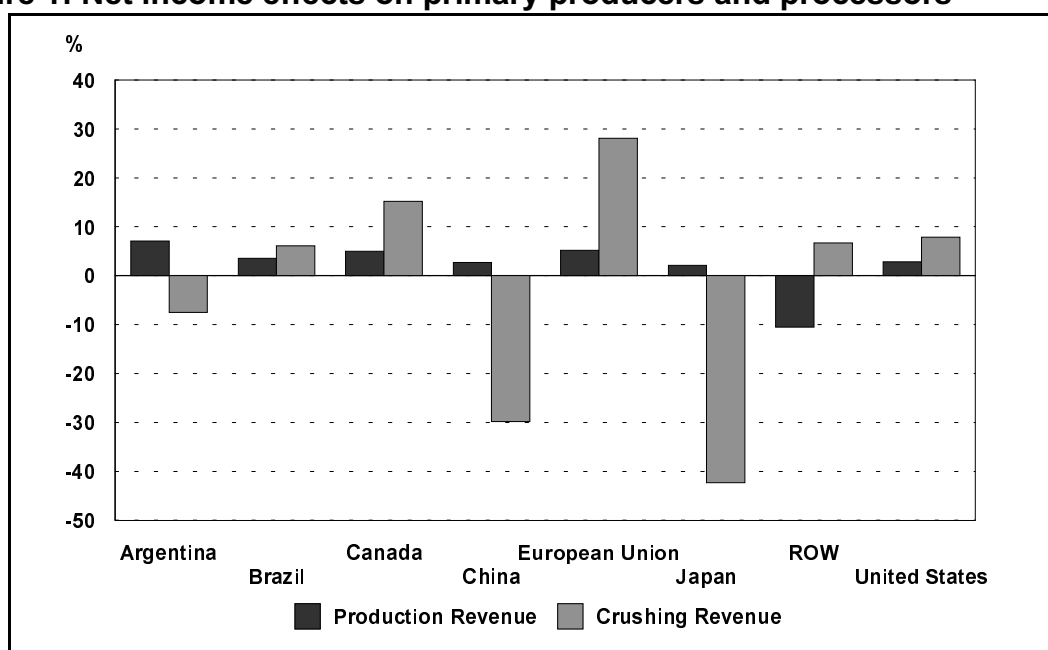
Country/Region	Oilseed Production	Oilseed Crush	Oilseed Oil Consumption	Oilseed Meal Consumption
World	0.2	0.2	-0.1	0.3
Argentina	1.0	-3.2	-2.0	-0.2
Australia	0.5	1.2	-0.7	-0.5
Brazil	1.2	1.9	-1.6	0.4
Canada	1.8	7.2	-1.8	0.0
China	0.6	-13.9	1.6	0.4
European Union	0.1	4.0	-1.8	-0.3
Japan	0.0	-24.3	2.0	-0.3
ROW	-3.0	2.7	1.9	1.5
United States	0.5	3.6	-1.0	-0.2

Note: Percentage changes in oilseed and oilseed product aggregate quantities.

What are the income effects, by country, on primary producers and processors?

In Figure 1, the grey columns indicate changes in crushing revenue above seed cost, while the black columns indicate changes in production revenue. In the case of crushing revenue, the largest increases occur in the European Union (28.1%) and in Canada (15.2%). Crushing revenue in Japan declines by 42.3% and by approximately 30% in China.

Oilseed producers (black columns) gain in all regions, except the ROW where gross revenue declines by 10.5%. In Canada, gross revenue from oilseed production increases by almost 5%.

Figure 1: Net income effects on primary producers and processors

What are the impacts on the economics of oilseed crushing in Canada and in competing countries, in terms of quantities and crushing margins for different types of oilseeds?

Quantity impacts are not large except in the case of the location of oilseed processing. Such a variable is difficult to predict. The size of the changes in the crushing margins are important but so are the AGLINK parameters on crushing demand. The elasticities of crush demand with respect to changes in the crushing margin largely determine the long-run location of processing facilities. The size of changes estimated for China and Japan lead to considerable rationalization of crushing activity in these countries. The ROW region, notably India, could expect to expand its processing of oilseeds. Countries such as Australia, Brazil, Canada, the European Union and the United States would increase oilseed crushing as processing margins improve in these areas. Primary producers in all regions, except in the ROW region, appear better-off as a result of tariff reform. Primary producers and processors in Canada appear to be the largest (relative) beneficiaries of tariff reform.

What are the critical policies in different countries, and in particular, what critical mass of change is required before the adoption of the zero-for-zero proposal is significantly advantageous?

While this is a difficult question to answer, a few different configurations were analyzed. Figure 2 shows the effects of changing the number of countries who participate in oilseed trade liberalization. The results are indicated for five Canadian variables: 1) oilseed crush, 2) seed production, 3) seed price, 4) crushing revenue, above the cost of seed, and 5) gross oilseed production revenue.

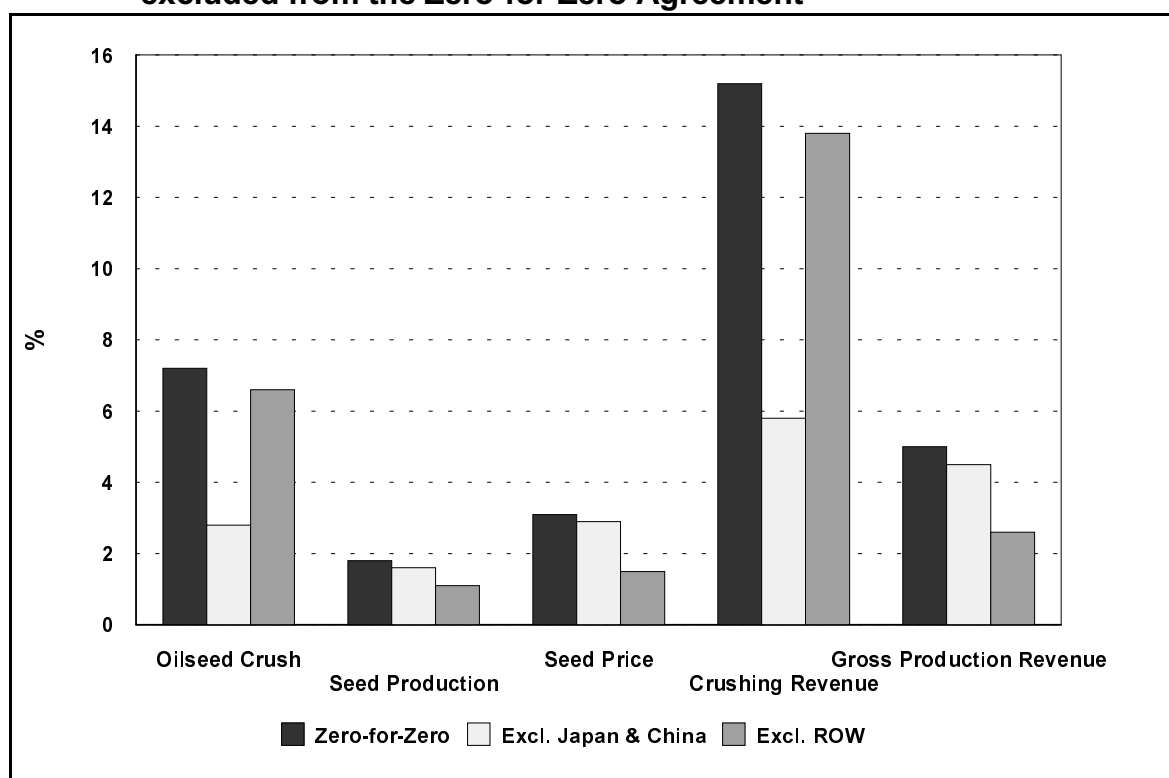
The black columns in Figure 2 show the effects of oilseed trade liberalization when all countries participate (i.e., the zero-for-zero proposal).¹ The light grey columns indicate what happens to the Canadian variables if all countries, except Japan and China, liberalize oilseed and oilseed product trade. Under this scenario, the benefits of trade liberalization are reduced and this is especially so for Canadian oilseed crushers. For Canadian oilseed crushers, the revenue gain is 15.2% if all countries participate in the trade liberalization, but the benefit is reduced to 5.8% if Japan and China are excluded. The gains for Canadian oilseed producers are not greatly affected by China and Japan not participating in the trade liberalization. If all countries participate, gross revenue of Canadian oilseed producers increases 5%, whereas if Japan and China do not participate revenue gains are 4.5%. Most of the gain to Canadian oilseed producers comes from elimination of the tariff on seed in the ROW.

1. The effects are percentage changes from the baseline simulation. For a more detailed discussion of the results, see Table 15 in Meilke and Swidinsky (1998).

The grey columns show the effects of trade liberalization if the ROW region does not participate. Under this scenario, the gains to Canadian oilseed crushers are nearly as large as they are when all countries liberalize. However, gains to Canadian oilseed producers are reduced by nearly 50%.

While other scenarios could be constructed, with different countries included and excluded from trade liberalization, these results are sufficient to show that who participates is important. In addition, the distribution of Canada's gains also differs, depending on which countries liberalize their border policies. Nonetheless, based on the three scenarios examined, Canada always gains from the trade liberalization of oilseed and oilseed products and the gains are larger as more countries participate in the liberalization initiative.

Figure 2: Impact on domestic variables when certain countries and regions are excluded from the Zero-for-Zero Agreement



What would be the additional impact of extending the proposal to a reduction of domestic subsidy support to zero?

In the preceding sections, the implications of removing border protection for oilseed and oilseed products trade have been examined. Throughout these exercises, it has been implicitly assumed that domestic policies would remain intact. This may not be a correct assumption. Many types of domestic policies, for example market price supports, cannot be maintained without border protection. However, other types of domestic policies, such as deficiency payments to domestic producers, could be continued without border protection. A logical extension of the zero-for-zero policy would be a zero-zero-zero policy which would eliminate export subsidies, tariffs and domestic policies on oilseeds and oilseed products. However, in order to undertake quantitative analysis of this option, considerable effort would have to be devoted to gathering information on domestic policies, particularly outside the OECD countries.

In the past few years, in some of the most important producing regions, there have been major changes in domestic policies influencing the grain and oilseed sectors. In the United States, non-commodity specific area payments have replaced deficiency payments for wheat and coarse grains. In Canada, the Western Grain Transportation Act (WGTA) has been eliminated and payments from domestic safety net programs have been sharply reduced. Even the European Union, where the oilseed PSE remains high, has agreed to limit oilseed production as a result of the Blair House Accord, signed during the Uruguay Round of multilateral trade negotiations.

In examining the current version of the AGLINK model, it appears that domestic policies play relatively little role in determining oilseed supply response for the countries included in the econometric model. No domestic oilseed policies are included for Australia, Mexico, ROW or the United States. For Canada, the WGTA subsidy is included in the model, but this program has been eliminated and has no effect on current output decisions. Direct payments to oilseed producers in the European Union and Japan are included in the model. As was the case with border protection, domestic policies may be more important in countries that are not explicitly represented in the AGLINK model. However, to identify these countries, uncover their domestic policies and include them in the AGLINK model would be a major data and information gathering exercise.

The growth rate in oilseed production has been modest in the developed countries, particularly since the 1980s. Conversely, the growth rate in South America and the less developed countries is larger and shows no signs of diminishing. This is even more pronounced for palm and tropical oil production. Consequently, an analysis of the effect of domestic policies on world oilseed production and trade would need to look carefully at the less developed countries. This would require identification, description and a model of the effects of their policies on world production.

The removal of all domestic policies in the oilseed and oilseed products' sector would lead to worldwide welfare gains. This argument follows from the standard gains from trade argument. However, the benefits of removing domestic policies would accrue primarily to domestic taxpayers, domestic consumers and oilseed exporters. Removing domestic oilseed policies would result in losses for domestic oilseed producers. Consequently, the political pressure to maintain these policies in subsidizing nations may be much greater than is the case for border measures. Canadian oilseed producers might gain from the removal of domestic support and protection worldwide. Currently, support to oilseed production in Canada is relatively small. Hence, producers would stand to benefit from the increase in world oilseed prices that would be expected to follow with the removal of domestic support. The quantitative measurement of the size of these gains would require a major research effort.

Conclusion

The primary objective of this study is to examine the effects of trade liberalization on the international and Canadian oilseed and oilseed product sector. The quantitative analysis focuses entirely on border measures, that is, the zero-for-zero proposal. The analysis suggests that under all the scenarios examined, Canada's oilseed crushers and producers would gain from trade liberalization. The exact size of these gains depends on the number of countries that participate in trade liberalization and on the sensitivity of Canadian crush demand relative to the crush margin¹.

Generally, it appears that Canada, along with several other developed countries and some less developed countries, gain from the zero-for-zero proposal. Both Canadian crushers and Canadian producers gain from the elimination of tariffs. These gains are offset to some extent by higher consumer prices for oilseed oils that average less than 2%. Livestock producers are largely unaffected by the tariff elimination since the price of oilseed meal changes only minimally, both in the short and long-run. Additionally, the more countries liberalize their trade policies, the larger the benefits. Benefits accrue to both Canadian crushers and oilseed producers from a relatively widespread liberalization effort.

Domestic policies also influence world oilseed production and trade. However, a careful analysis of the impact of the removal of domestic policies is not possible without an evaluation of the size and the scope of these policies in less developed countries. Given the current level of support and protection provided to Canadian oilseed producers, it seems likely there would be further gains to primary oilseed producers if domestic support and protection for oilseed producers in other countries were eliminated.

1. In essence, the more sensitive the Canadian crushing industry is to changes in the crush margin, the greater are the benefits of liberalization. Details regarding elasticity sensitivities are discussed in Meilke and Swidinsky (1998) and Meilke and Jay (1997).

Bibliography

- Canadian Oilseed Processors Association. 1988. International Barriers to Trade and the Canadian Oilseed Processing Industry. (Submission), Winnipeg, Manitoba.
- Carter, C.A. and Mooney. 1985. "Japanese Tariff Protection of Rapeseed and Soybean Oil Processing." Canadian Journal of Agricultural Economics, Vol. 35, pp. 305-15.
- Furtan, W.H., J.G. Nagy and G.G. Storey. 1979. "The Impact on the Canadian Rapeseed Industry from Changes in Transport and Tariff Rates." American Journal of Agricultural Economics, Vol. 61, No. 2, pp. 238-248.
- Griffith, G.R. and K.D. Meilke. 1980. A Description of the Market Structure and Agricultural Policies in Five Regional Oilseed and Oilseed Product Markets. School of Agricultural Economics and Extension Education, University of Guelph, Ontario.
- Griffith, G.R. and K.D. Meilke. 1983. "The Impact on the Canadian Rapeseed Industry of Removing EEC Import Tariffs." Journal of Policy Modelling, Vol. 5, No. 1, pp. 37-54.
- Labys, W. C. 1977. "Multicommodity Substitution Patterns in the International Fats and Oils Market." European Review of Agricultural Economics, Vol. 4, No. 1, pp. 75-84.
- Landell Mills Commodities Studies, Inc. 1991. The Impact of the Reduction or Elimination of the Japan Customs Oil Tariff on the Western Canadian Canola Industry. New York, NY.
- Landell Mills Commodities Studies, Inc. 1991. Oils and Oilseeds: The Cost Competitiveness of Major Producing and Processing Countries. New York, NY.
- Larson, D.F. 1996. Indonesia's Palm Oils Subsector. World Bank, International Economics Department, Commodity Policy and Analysis Unit.
- Meilke, K.D. and G.R. Griffith. 1983. "Incorporating Policy Variables in a Model of the World.
- "Soybean/Rapeseed Market." American Journal of Agricultural Economics, Vol. 65, No. 1, pp. 65-73.

- Meilke, K.D. and M. Jay. 1997. Zero-for-Zero and the Canadian Oilseed Complex. A report prepared for Agriculture and Agri-Food Canada, Ottawa, Ontario.
- Meilke, K.D. and M. Swidinsky. 1998. An Evaluation of Oilseed Trade Liberalization. A report prepared for Agriculture and Agri-Food Canada, Ottawa, Ontario.
- OECD. 1994. The World Oilseed Market: Policy Impacts and Market Outlook. Paris, France.
- OECD. 1997a. Agricultural Policies in OECD Countries: Measurement of Support and Background Information. Paris, France.
- OECD. 1997b. The Agricultural Outlook 1997-2001. Paris, France.
- Paddock, B. and J. Bowen. 1994. The Impact of the Grain Transportation Reform on Canadian Canola Crushers. Economic and Policy Analysis Directorate and Innovation Division, Policy Branch, Agriculture and Agri-Food Canada, Ottawa, Ontario.
- Tsigas, E.C. and S. Langley. 1995. Trade Implications of Soybean Policies. USDA, ERS, Commercial Agriculture Division, Asia and Western Hemisphere, Working Paper, Washington, D.C.

APPENDIX: APPLIED AND EFFECTIVE TARIFFS BY AGLINK REGION

Table A.1

		Net Trade		Applied Tariff	Effective Tariff		Region Status in AGLINK
		1992-95	Soy, Rape, Sun		Palm		
				(kt)		1997	
Argentina	Oil	2,517	10	0	10	Consumption endogenous, palm oil tariff only included -- Export Rebate 1.35%.	
	Meal	8,108	6	0		Net exporter.	
	Oilseed	3,247	8	0		Net exporter — Export Tax 3.5%.	
Australia	Oil	-49	5	5	0	Consumption endogenous, oil tariff included, no palm oil consumption.	
	Meal	-166	0	0		Net importer but tariff is zero.	
	Oilseed	98	0	0		Net exporter.	
Brazil	Oil	987	10	0	10	Net exporter.	
	Meal	8,510	6	0		Net exporter.	
	Oilseed	3,585	8	0		Net exporter.	
Canada	Oil	401	8	0	8	Net exporter.	
	Meal	299	0	0		Net exporter.	
	Oilseed	2,665	0	0		Net exporter.	
China	Oil	-939	19	19	9	Consumption endogenous, both oil and palm oil tariffs included.	
	Meal	1,352	5	0		Net exporter.	
	Oilseed	426	7	0		Net exporter.	
Czech Republic	Oil	42	27	0	0	Net exporter.	
	Meal	-127	0	0		Net importer but tariff is zero.	
	Oilseed	32	68	0		Net exporter.	

Table A.1

		Net Trade		Applied Tariff	Effective Tariff		Region Status in AGLINK
		1992-95			Soy, Rape, Sun	Palm	
		(kt)					
EU15	Oil	1,256	8	0	5	Consumption endogenous, palm oil tariff only included.	
	Meal	-13,448	0	0		Net importer but tariff is zero.	
	Oilseed	-16,124	0	0		Net importer but tariff is zero.	
FSU	Oil	-427	15	15	5	Net importer but exogenous consumption.	
	Meal	-1,076	5	5		Net importer but exogenous consumption.	
	Oilseed	848	9	0		Net exporter.	
Hungary	Oil	156	10	0	8	Net exporter.	
	Meal	-418	6	0		Net importer but tariff is zero.	
	Oilseed	124	8	0		Net exporter.	
Japan	Oil	-11	23	23	5	Consumption endogenous.	
	Meal	-1,052	0	0		Net importer but tariff is zero.	
	Oilseed	-6,671	0	0		Net importer but tariff is zero.	
Mexico	Oil	-322	10	0	10	Net importer but tariff set to zero because of NAFTA, palm oil tariff included.	
	Meal	-260	15	0		Net importer but meal tariff set to zero because of NAFTA.	
	Oilseed	-2,827	13	0		Net importer but seed tariff is zero.	
Norway	Oil	1	0	0	0	Net exporter.	
	Meal	45	0	0		Net exporter.	
	Oilseed	-242	0	0		Net importer but exogenous consumption and tariff is zero.	

Table A.1

		Net Trade		Applied Tariff	Effective Tariff		Region Status in AGLINK
		1992-95	Soy, Rape, Sun		Palm		
		(kt)	1997	(%)			
Poland	Oil	-133	67	67	10	Net importer but exogenous consumption.	
	Meal	11	3	3		Net exporter.	
	Oilseed	107	14	0		Net exporter.	
Slovakia	Oil	-2				Net importer, consumption exogenous, no tariff information.	
	Meal	-50				Net importer, consumption exogenous, no tariff information.	
	Oilseed	13				Net exporter.	
Switzerland	Oil	-26	184	184	170	Net importer but exogenous consumption, no tariff information.	
	Meal	-35	0	0		Net importer but exogenous consumption, no tariff information.	
	Oilseed	-94	50	50		Net importer but exogenous consumption, no tariff information.	
Turkey	Oil	-283	32	32	12	Net importer, consumption exogenous.	
	Meal	-238	2	2		Net importer, consumption exogenous.	
	Oilseed	-422	25	25		Net importer, consumption exogenous.	
United States	Oil	643	20	0	0	Net exporter.	
	Meal	4,771	3	0		Net exporter.	
	Oilseed	20,644	0	0		Net exporter.	
ROW* (See next table for a breakdown by country)	Oil	-3,760	18	18	14	Consumption endogenous, both oil and palm oil tariffs included.	
	Meal	-7,327	6	6		Consumption endogenous tariff included.	
	Oilseed	-5,824	11	11		Consumption endogenous tariff included.	

Table A.2

ROW Regions		Net Trade		Applied Tariff	Effective Tariff			Region Status in AGLINK
		1992-95			Soy, Rape, Sun		Palm	
		(kt)			1997 (%)			
Algeria	Oil	-340		5	5		5	Net importer.
	Meal	-390		5	5			Net importer.
	Oilseed	-18		5	5			Net importer.
Bangladesh	Oil	-260		30	30		30	Net importer.
	Meal	0		0	0			No Trade.
	Oilseed	-50		8	8			Net importer.
Egypt	Oil	-237		1	1		1	Net importer.
	Meal	-464		10	10			Net importer.
	Oilseed	-103		1	1			Net importer.
Indonesia	Oil	-60		0	0		0	Net importer.
	Meal	-1,015		5	5			Net importer.
	Oilseed	-715		0	0			Net importer.
India	Oil	-200		20	20		40	Net importer.
	Meal	3,565		0	0			Net exporter.
	Oilseed	0		15	15			No Trade.
Korea	Oil	-71		8	8		3	Net importer.
	Meal	-1,559		2	2			Net importer.
	Oilseed	-1,437		1	1			Net importer.
Malaysia	Oil	65		0	0		0	Net exporter.
	Meal	-495		0	0			Net importer.
	Oilseed	-648		0	0			Net importer.

Table A.2

ROW Regions		Net Trade		Applied Tariff	Effective Tariff			Region Status in AGLINK
		1992-95			Soy, Rape, Sun	Palm		
		(kt)					(%)	
Morocco	Oil	-245		10	10		10	Net importer.
	Meal	-52		10	10			Net importer.
	Oilseed	-79		10	10			Net importer.
Pakistan	Oil	-155		47	47		59	Net importer.
	Meal	-105		21	21			Net importer.
	Oilseed	-11		10	10			Net importer.
Philippines	Oil	-16		20	20		30	Net importer.
	Meal	-900		10	10			Net importer.
	Oilseed	-160		3	3			Net importer.
Romania	Oil	-45		25	25		25	Net importer.
	Meal	-275		28	28			Net importer.
	Oilseed	-125		25	25			Net importer.
South Africa	Oil	-258		0	0		8	Net importer.
	Meal	-165		7	7			Net importer.
	Oilseed	-200		8	8			Net importer.
Thailand	Oil	-11		20	20		11	Net importer.
	Meal	-830		5	5			Net importer.
	Oilseed	-426		0	0			Net importer.
Venezuela	Oil	-245		20	20		20	Net importer.
	Meal	-440		15	15			Net importer.
	Oilseed	-204		5	5			Net importer.

