

The Economic and Environmental Impact of Agricultural Subsidies: An Assessment of the 2002 US Farm Bill and Doha Round

Authors: Karel Mayrand, Stéphanie Dionne, Marc Paquin and Isaak Pageot-LeBel

The Uruguay Round Agreement on Agriculture (URAA)¹ brought world agricultural production and trade under a rules-based regime that governs market access, domestic support and export subsidies. Since the integration of agriculture into the URAA multilateral trade negotiations in the 1990s, agricultural trade liberalization has become one of the most controversial issues in trade policy debates. As a new round of negotiations opens in the World Trade Organization (WTO), the debate turns once more to the issue of domestic support in agriculture.

International trade policies and government intervention—through subsidies or indirect forms of support—can influence choices in agricultural production such as the type of crop or livestock, mode (technology and inputs) and quantity. Such decisions can affect global trade levels, industry structure and production location, which in turn may impact the environment. This paper aims to assess the environmental impacts of agricultural subsidies, using wheat as an example and compare the economic impacts of the quantitative and qualitative shifts in the domestic support policies of the US Farm Bill and the Doha Round.

The study finds that the US Farm Bill provides incentives for increased agricultural output through an intensification of production with potential negative environmental impacts. These subsidies tend to be regressive and support larger farmers. By giving incentives to increase the total cultivated area for such crops as soybean, wheat or corn, the Bill also reduces cropping flexibility. The level of this support, combined with the reintroduction or extension of programs or payments linked to output or price is likely to increase US agricultural production in excess of the levels that normally characterize free markets. As a result, this production surplus will impact world markets with export credit and food aid programs, thus depressing commodity prices and distorting agricultural trade flows.

The Doha Round's reduction or elimination of domestic support and export subsidies and liberalization of market access is predicted to increase world pricing of agricultural products and boost agricultural trade. In addition, such liberalization may result in increased production in developing countries and a segment of OECD countries. The result of this new interplay of comparative advantages might be small on the whole, but could be more significant for some commodities such as wheat. Developing countries are expected to benefit from this new competitive environment and capture an increasing share of world trade.

This analysis leads to the conclusion that the Doha Round is likely to result in a reengineering of domestic support policies in OECD countries, away from trade distorting Amber Box support and towards Green Box support. This has major implications for both trade and environment policy, since the impacts of the Doha Round will influence the transformation of domestic support policies in the next fifteen years. This will also certainly lead OECD countries to reassess their domestic support system in light of the new context.

Based on its analysis of current subsidies in OECD countries, the paper suggests that there would be considerable benefits in redirecting domestic support away from the most environmentally

¹ *The Agriculture Agreement Contained in the Final Act of the 1986–1994 Uruguay Round of Trade Negotiations, Annex IA—Multilateral Agreements on Trade in Goods.*

harmful subsidies such as market-price support and output/input-based payments, towards more environmentally neutral support measures that are also less trade distorting and more equitable. The paper also offers some policy considerations, including the potential for developing agro-environmental programs in the context of the redevelopment of domestic agricultural support.

Conclusions

Three major conclusions are derived from this study. First, higher subsidies such as provided for in the US Farm Bill may lead to an intensification of agricultural production in OECD countries that can generally be considered damaging to the environment. In addition, subsidies have a technology “lock-in” effect that may impede the shift to less environmentally harmful policies, and they also lead to increased crop specialization and reduced agro-biodiversity. A decrease in domestic support would favor the diversification of production, thereby improving agro-biodiversity.

Second, the phasing out of Amber Box policies as a result of the Doha Round could benefit both trade liberalization and environmental protection. Decoupling subsidies from production levels and price reduces the incentives to intensify or extend production, thereby mitigating environmental pressures. In addition, the OECD’s work suggests that the replacement of production-based support with direct income payments can improve the efficiency of agricultural support, thus freeing resources that could be redirected towards agro-environmental programs. In addition, it might improve the performance of agro-environmental programs by removing counter-incentives.

Third, OECD agricultural support remains largely concentrated in market-price support and output/input-based payments, which are the most environmentally harmful types of subsidies, while agro-environmental programs still represent less than five per cent of OECD Green Box support. This highlights the challenge in conducting an environmental reform of domestic support programs, but provided that they are well designed, efficient, and consistent with WTO provisions, agro-environmental programs hold the promise of a more sustainable and economically sound agriculture. Eco-conditionality also appears to be a promising alternative in that regard.

The Doha Round opens the door for a major reengineering of agricultural support programs to generate optimal trade and environmental outcomes. This constitutes an opportunity to initiate such a multilateral redesign through the phasing out of Amber Box policies and the tightening of criteria for complying with Green Box support requirements. This opportunity should be seized by initiating a multilateral assessment of the sustainability of domestic support programs in OECD countries. The conclusions of this process could orient the redeployment of agricultural domestic support in OECD countries, and ultimately help vary the mix of OECD domestic support measures.

In addition, the paper recommends the development of a cooperation program to help developing countries face the additional environmental pressures generated by the intensification of their agricultural production in the wake of the Doha Round. Such cooperation would ensure better environmental management in developing countries, long-term sustainability of world food supplies, and prevent transboundary environmental spillovers.

The paper’s recommendations outline an ambitious agenda for reform in the field of agricultural domestic support. It is clear, however, that the Doha Round will encourage new reforms in the design, level and delivery of subsidies. The Doha Round constitutes a unique opportunity to

shape the next generation of agricultural policies in order to promote a more efficient, less trade distorting and environmentally sustainable agriculture. Ultimately, the goal of agricultural policies should be to internalize the environmental costs associated with agricultural production, and agricultural subsidies have an important role in supporting such a transition.