

THE AGRICULTURE SECTOR: ENVIRONMENTAL BENEFITS OF TRADE LIBERALIZATION

ITEM 6

Submission by Brazil

I. INTRODUCTION

1. This paper aims to contribute to the discussions in the Committee on Trade and Environment (CTE) on the environmental benefits of eliminating trade restrictions and distortions in the agriculture sector.

2. Pursuant to Principle 12 of the Rio Declaration of 1992, Agenda 21 established, in Chapter 14 ("Promoting Sustainable Agriculture and Rural Development"), the following role for GATT and other international organizations in the activities of international and regional cooperation and coordination:

"Encourage, in the context of achieving sustainable agricultural development and consistent with relevant internationally agreed principles on trade and environment, a more open and non-discriminatory trading system and the avoidance of unjustifiable trade barriers which together with other policies will facilitate the further integration of agriculture and environmental policies so as to make them mutually supportive".

3. Accordingly, the WTO Decision on Trade and Environment of 15 April 1994 instructs the CTE to address the issue of "the effect of environmental measures on market access, especially in relation to developing countries, in particular to the least developed among them, and environmental benefits of removing trade restrictions and distortions".

4. Brazil considers that the Secretariat's Note on "Environmental Benefits of Removing Trade Restrictions and Distortions" (WT/CTE/W/67) is a good basis upon which to identify situations where trade liberalization and environmental protection can be mutually supportive. To achieve a more substantial progress in the discussions under Item 6 (Market Access), Brazil feels that Members should bring their national experiences of sectors in which trade liberalization represents existing or potential "win-win" situations for both trade and environment.

A. NON-TRADE CONCERNS IN THE AGRICULTURE SECTOR

5. As the Secretariat's paper WT/CTE/W/67 notes, "the political economy of trade protection is such that although trade restrictions and distortions may impose burdens on society as a whole, they are particularly difficult to remove due to the resistance from domestic coalitions and special interest groups. Welfare gains from trade liberalization, including improvements in the environment, exceed costs when viewed in an economy-wide perspective rather than from the perspective of the adversely affected interest group. Institutional reform, permitting trade policy to be viewed in an economy-wide

perspective along with the net benefits to society at large - including environmental benefits - would facilitate the task of removing trade restrictions and distortions”.

6. In considering the relationship between market access and the environment, the concept of multifunctionality of agriculture has been mentioned to emphasize the need to address environmental aspects of agricultural production and also as an attempt to justify the maintenance – or even the increase – of subsidies in the agriculture sector. In fact, the Agreement on Agriculture already includes provisions that take into consideration non-trade concerns: paragraph 3 (public stockholding for food security purposes) and paragraph 12 (payments under environmental programmes) of Annex 2 and Article 12 (export restrictions).

7. The concept of multifunctionality is not new. It has existed for years and applies to all types of economic activities, not only agriculture. As explained in the informal paper submitted by New Zealand to the Committee on Agriculture (AIE/28 – “Side Effects of Agricultural Policies and Production”), “all agricultural production has outcomes broader than the production of food and fibre. These outcomes (known in economic terms as 'externalities') relate to different features including the rural landscape, the environment, biodiversity and socio-economic elements.” Thus, governments have the responsibility of deciding how to combine production needs with policies that best address the multifunctional aspects of agricultural production. They also need to approach the issue by carefully distinguishing between valid policy objectives and legitimate policy instruments applied to achieve these objectives. Multifunctionality can pave the way to sustainable development.

8. As a matter of fact, trade liberalization is not incompatible with the multifunctional character of agriculture. It is not evident that negative externalities related to agricultural production have more of an impact on low-support countries than on high-support countries. Use of high levels of pesticide, loss of biodiversity or soil erosion are all problems or negative externalities that may occur both in low and high-support countries. Preoccupation with multifunctionality aspects is not a prerogative of high support countries, but it is also part of the policies followed by countries that pursue trade liberalization in this sector. In Brazil, trade liberalization has proven to be an important tool to encourage the development of sustainable agricultural production.

9. There is strong evidence that the concept of "multifunctionality" should not be used as a justification for the maintenance of agricultural protection and subsidies. The Australian paper WT/CTE/W/105 demonstrates that subsidies, in particular those which are still coupled to production, can result in an increase of agricultural output, affecting negatively the environment and distorting production and trade by encouraging overexploitation of the soil and excessive consumption of fertilizers and pesticides.

10. Trade-distorting policies have the effect of impeding trade, hampering exports from various countries, including developing countries. Most often, many of these countries, like Brazil, rely heavily on earnings derived from food exports. In the case of Brazil, around 32 per cent of its total exports come from the agricultural sector. Agricultural trade liberalization has thus positive effects on the economic development of Brazil, helping to alleviate poverty. As stated in Principle 5 of the Rio Declaration and Chapter 3 of Agenda 21, poverty is highly associated with damaging environmental practices.

11. If the concept of multifunctionality is to be justified by or applied to attain environmental preservation objectives, then it should be understood as a global responsibility. It should be considered in a broader and more universal perspective, which takes into account common ways to combine trade liberalization with environmental preservation. Thus, it would be unfair to pursue multifunctional policies to the detriment of other trading partner's economy and/or environment. Normally, the environmental benefits obtained in subsidizing economies are often neutralised by the

environmental costs provoking increased production in non-subsidising countries. The identification of “win-win” outcomes can be achieved and should, then, be the main goal of multifunctionality .

B. ENVIRONMENTAL BENEFITS OF TRADE LIBERALIZATION

12. Trade liberalization *per se* does not lead automatically to environmental protection; it should be accompanied by sound environmental policies and practices. Trade liberalization, however, is certainly a decisive step towards the implementation of appropriate environmental policies and practices. In commodity-exporting countries, particularly developing ones, benefits derived from freer access to markets represent a fundamental source of funds for research and development of new agricultural technologies and sustainable production practices that will protect the environment.

13. Other environmental benefits of raising income resulting from trade liberalization in agriculture are mentioned in paragraphs 37 and 38 of WT/CTE/W/67 and include: declining population growth; increasing demand for pollution control; and stimulating consumption of environmentally-friendly products. This paper will focus on the positive effects of market access to ensure the internalisation of environmentally sound production practices in the agriculture sector.

II. ENVIRONMENTAL BENEFITS OF AGRICULTURAL TRADE LIBERALIZATION IN BRAZIL

A. NEGATIVE IMPACTS OF AGRICULTURAL SUBSIDIES

14. According to OECD studies, subsidies and price support initiatives in the agricultural sector have provided farmers with a disincentive to rotate crops. By concentrating their plantation in the subsidized crop, farmers end up practising monoculture, which is known to be one of the main causes of soil erosion and of overuse of fertilizers and pesticides.

15. The above mentioned environmentally negative effects take place not only in the country or region that is subsidizing agriculture. The artificially lower international prices due to subsidies force non-subsidized farmers to either overexploit their own resources to meet market conditions or to resort to monoculture or, ultimately, to go out of business. In any case, agricultural subsidies in international trade have a negative effect on the internalisation of environmentally sound agricultural practices and on the reduction of rural poverty.

16. These comments are not theoretical but based on national experience: until the early 1980s, the agricultural sector in Brazil was highly protected. When liberalization began, a series of inefficiencies in the use of Governmental support became evident. During this period of intervention, a moment of growth in domestic agricultural production did indeed occur, but important production factors were wasted. The protection of the environment and the introduction of sustainable production practices then ranked very low among farmers' priorities. As a consequence, the agricultural sector became very dependant on Governmental support and this situation brought about a series of trade and environment related problems, many of which Brazil still has to cope with today. However demanding those challenges may be, Brazil is endeavouring to overcome the difficulties of this transitional period. As described later in this paper, in spite of all the remaining obstacles in international trade, the Brazilian agricultural sector has benefitted from positive outcomes from the trade liberalization process.

B. AGRICULTURAL INCOME AND INVESTMENTS IN SUSTAINABLE TECHNOLOGY METHODS

17. Research and development in agriculture in Brazil today is no longer focused only on increasing productivity (as it was in the past), nor on economic efficiency in the short term, but on the sustainability of the sector. Today, new production methods have to take into account agronomic,

social, economic and ecological aspects. Because of the rich biological, climate and soil diversity in Brazil, farm exploitation may have different impacts on the environment. This requires the development of different models of sustainable production. Most importantly, these models also have to meet stricter federal and local environmental regulations.

18. Today, higher – and not lower – levels of technology are required to maintain higher levels of productivity. The use of unsustainable practices in agriculture – such as the use of fire to clear old cattle pastures or forest areas, or the inadequate use of pesticides, for example – have proven to result in serious environmental damages, as well as to decrease productivity in the medium to long term.

19. One important aspect of the introduction of sustainable production methods in Brazil has been that private producers are increasingly the main investors in research and development in the agricultural sector. The availability of revenues – which do not come from Governmental subsidies – is the key factor for the development of appropriate environmental technologies targeted to sustainable production methods. The issue of the **increase in agricultural income** is directly linked to the introduction of environmental management systems in agriculture. The raising – or simply the maintenance – of optimal levels of agricultural income will translate itself into improved environmental production methods. Increased rural income will obviously depend on better market access conditions for agricultural commodities.

III. THE CASE OF CONSERVATION TILLAGE OR NON-TILLAGE SYSTEMS

20. The success of the use of Non-Tillage method in soya, corn, millet and sorghum in Brazil demonstrates how trade liberalization and, consequently, the increase in rural incomes enables the introduction of more sustainable production practices.

21. Brazil is the second largest world producer of soya. While 1/3 of national production goes to the internal market, the other 2/3 are exported – which represented US\$ 3.8 billion in 1995. As a result, the revenue yielded by soya depends on Brazil's access to foreign markets. These revenues were decisive in determining the conditions for the introduction of **Conservation Tillage** or the **Non-Tillage Planting System** in the cultivation of soya.

22. Conventional tillage provides a smooth, unridged soil surface that can encourage serious runoff and erosion problems on sloping crop land. In contrast, the Non-Tillage Planting System leaves at least 30 per cent of the field surface covered with crop residue after planting has been completed and involves reduced or minimum tillage. This planting system prepares a seedbed 2 inches wide or less, leaving most of the surface undisturbed and still covered with crop residues. The result is a wetter, colder environment that protects the seed and soil with its insulating effect on the surface residue. Non-Tillage requires investments in specific seeding machinery and in appropriate technology and techniques, as well as rotation of crops and diversification of species.

23. Thanks to the protective layer of crop residues (the mulch), the Non-Tillage System results in several environmental benefits for soil management, including:

- reduction by more than 90 per cent of soil erosion;
- reduction of floods and silting of riverbeds;
- stabilization of soil temperature and moisture levels, thus favouring biological processes in the soil; and
- increase of the organic components in the soil.

24. Concerning the use of herbicides in the Non-Tillage System, the practice of crop rotation and the use of green manure, together with the appropriate use of chemical products has resulted in a

reduction of approximately 80 per cent of the amount used in Conventional Tillage. Recent experiments with corn have reduced the use of herbicides to zero in the post-plantation process.

25. Concerning greenhouse gas emissions, particularly CO₂ emissions, studies in the United States¹ have demonstrated that the tilling process in the Conventional System results in a loss of organic matter and emission of carbon dioxide, thus contributing to the greenhouse effect. A wider diffusion of the Non-Tillage System could absorb up to 16 per cent of CO₂ emissions by fossil fuels. As it is a highly mechanized process, the Conventional System is also responsible for high levels of CO₂ emissions. Non-Tillage has been responsible for a reduction of 64 per cent to 74 per cent of CO₂ emissions.

26. Another significant positive environmental effect of the use of the Non-Tillage System is related to the conservation of biodiversity, since it encourages the development of biomass and biological activity in the soil. At the same time, the enrichment of soil nutrients has a highly positive effect on agricultural productivity and consequently there is no need to expand the arable area into native forests.

27. Since 1990, the use of the Non-Till System as a sustainable production practice in Brazil was used for almost 6 million hectares during the 1996/1997 harvest, and represented an increase of approximately 1 million hectares of soya per year. Around 1.5 million hectares of Non-Till is being used in the Cerrado region – the largest tropical area where this planting technique is applied.² In the state of Paraná (one of the largest soya and corn producers in Brazil), for instance, while in 1995 Non-Till was used in nearly 40 per cent of the soya plantation area, today it has reached 60 per cent. In that state, the productivity levels with conventional planting have been negative (5.4 per cent), as opposed to a productivity of 44 per cent with the Non-Till System for soya (and 38 per cent for corn).

IV. CONCLUSION

28. This submission means to demonstrate that trade liberalization plays a key role in the promotion of sustainable development. In the agricultural sector, better market access conditions have resulted in increased agricultural income. This income is the main resource for investment in research and development of environmentally sound technologies and practices.

29. In order to ensure that trade and environment are mutually supportive, trade liberalization should always be accompanied by sound environmental policies. On the other hand, the possibilities of internalisation of environmental costs will remain considerably reduced as trade restrictions and distortions continue to hamper the agricultural sector as well as the increase in agricultural income. This is a common concern for commodities-exporting countries, and it is particularly sensitive for developing countries that have limited resources to invest in sustainable production practices.

30. Brazil considers that non-trade concerns in the agricultural discussions should not be misused, in order to justify trade restrictions and distortions. In most developing countries, the agriculture sector represents a large, if not the largest part of their economies. Those countries are particularly aware of the social, economic and environmental aspects of the agriculture sector. The discussions on multifunctionality should not be limited to the social considerations on the maintenance of the landscape. As stated in Agenda 21, the multifunctionality of sustainable agriculture – which is

¹ Conservation Technology Information Center, CTIC Partners, vol. 14, no. 3, April/May 1996, in *O Meio Ambiente e o Plantio Direto*.

² WWF, José Roberto Marinho (Chairman), in *O Meio Ambiente e o Plantio Direto*, page 49.

directly related to the higher objective of reducing poverty, for example – should be promoted in the context of a more open and non-discriminatory trade system.

Sources:

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