

Executive Summary

Environmental considerations are a major part of the debate over globalization. The largest area of trade barriers is for agricultural products. At the same time, achieving environmental goals requires improvements in farming practices. Given the economics of farming and the difficulty of changing long standing farming practices, farm subsidies are important to achieving these improved practices.

The WTO Agreement on Agriculture negotiated in the Uruguay Round recognized some environmental payments to farmers as a part of the so-called Green Box permitted subsidies. However, the Green Box is limited. Incentive or sign up bonuses, land rent payments and payments for environmental benefits from changes in farming practices are not covered in the Green Box provisions. Furthermore, the Green Box is not clear on how multifunctionality or the polluter pays principle is to be treated. Ambiguities exist over procedural problems of dividing farm payments between the various WTO categories of permitted and limited farm payments.

Given the importance of environmental improvements, WTO obstacles or uncertainties regarding such agri-environmental matters ought to be removed or resolved. WTO must be a part of solving these problems. The Doha Round of WTO talks is an opportunity to make such progress. Needed changes include:

- Recognition that cost reimbursement is not the sole touchstone for environmental payments to farmers.
- Recognition that agri-environment and agri-development programs may be best merged and in this sense multifunctional.
- Acceptance of divisibility of payments to farmers among diverse program goals.
- Assurance that the decision making process has the necessary expertise to deal with the environmental realities and trade economics.
- Recognition that the enormous subsidies currently allowed by the Green, Blue and Amber Boxes are trade distorting and environmentally destructive, and have failed to stabilize farm income.

Developing countries, the Carins group, the United States, and others who have been strong advocates for trade are sure to be suspicious that changes in WTO to promote environmental and conservation programs will lead to trade distorting subsidies. To minimize the risk that this will occur, environmental programs should incorporate certain principles including:

- Clear design of programs, identification of objectives, and definition of payments to make programs and their administration transparent.
- Target payments to avoid over-compensation and intensification.
- When alternative programs can be used, select the one that is least trade distorting and the one that does not discriminate against import goals.
- Limit departures from the Polluter Pays Principle to settings where the farmer provides benefits and goes beyond prevailing farming practices.
- Be watchful for problems faced by developing countries.

The Doha Round is an opportunity to recognize the critical role of environmental and conservation principles in the rules for the global economy.

Introduction

The global community is struggling with a staggering series of challenges. Among the most difficult is how we live in harmony with the physical world and available resources. Given agriculture's dominant utilization of the earth's surface, responsible farming practices and visionary agricultural policies are crucial to meeting the environmental challenge. Increasingly, developed nations are turning to programs that provide payments to farmers to promote such practices.

Free and fair trade is another challenge. Tremendous growth in the global economy in recent years has led to the establishment of the World Trade Organization (WTO) and the continual negotiation of limits on tariffs, trade distorting subsidies, and restrictions on commerce. However, the primacy of economic growth, comparative advantage, and other goals of global trade liberalization must be weighed against and integrated with competing considerations such as safety, the environment, and workers' rights. This challenge presents itself with particular potency in the area of agriculture.

The topic of trade, agriculture and the environment has many dimensions. A large body of literature deals with the effects of liberalizing trade on the environment and conversely, the effects of an aggressive environmental agenda on trade. There has been WTO litigation and international controversy: tuna/dolphin, shrimp/turtle, beef hormones, the salmon ban by Australia, Japanese policies on fruits and vegetables, and reformulated gasoline are but a few contentious issues. There are international treaties on the ozone, bio-diversity, whaling, hazardous wastes, endangered species, and dozens of other topics and developing frameworks like the 'Kyoto Accord on Global Warming.' Conferences have been held in Rio de Janeiro and Johannesburg on the environment and sustainability. The relationship between trade, agriculture, sustainable development, and the environment is clearly an expansive subject.¹

Approaches to solving environmental and conservation problems are varied. Payments, loans, subsidies, tax credits, income deductions, and education programs are all positive incentives to influencing good conduct; while prohibitions, regulations, fines, penalties, forfeiture, and other coer-

**"It's not easy
being green."**

—Kermit the Frog

Multifunctionality. The complementary role played by agriculture in addition to producing food. It includes its contribution to sustainable development, the protection of the environment, the sustained vitality of rural areas, poverty alleviation, and landscape aesthetics.

cive measures represent the proverbial stick. Consumer action via labeling, boycotts, and promotions are other tactics.

In addition, broader societal goals are part of the subject mix. Areas where agricultural and environmental concerns intersect include land redistribution, preservation of family farms, biodiversity, organic farming, animal welfare, food security, landscape preservation, and the economic viability of rural areas and of developing nations. Efforts to simultaneously address two or more of these objectives with a single program has been dubbed ‘multifunctionality,’ an approach particularly favored in Europe.

GREEN LEXICON

This report addresses but one corner of this expansive subject. That corner is the relationship between the free trade policies of the WTO and payments made by governments to farmers to promote environmental and conservation objectives. Such payments are often called “green payments.” The WTO defines a range of permitted payments and places some of them in the so-called “Green Box.” However, this “green” box encompasses more than the environment. It is “green” as in “go” to signify farm programs that proceed under WTO without any monetary limit.

The crucial question is the fit between the Green Box and environmental payment programs that currently exist or may be deemed important. If the fit is not right, what must be changed? On one hand, such payment programs should not be merely a new edition of existing trade-distorting subsidies to farmers, disguised as environmental incentives. On the other, given the catastrophic consequences of failing to meet the environmental challenge, the global community cannot afford to let the WTO handicap efforts to clean up the environment by closing the lid too tightly on the Green Box. The WTO must be part of the solution, not part of the problem.

THE DOHA TRADE ROUND

The global trade debate is rapidly taking center stage as the global community gears up for the next round of trade negotiations launched at Doha, Qatar, set to begin this year. Environmental issues will be part of the mix of concerns. Deliberations are complicated by the diversity of positions and perspectives. Unlike earlier rounds when the developed nations and the OECD members dominated discussions, blocks of developing countries are increasingly vocal. Progress is needed both to improve trade opportunities and to better integrate a range of considerations, including the environment, into trade policy.

An interrelated major controversy in the Doha Round is agricultural trade. Although environmental and conservation subsidies are not at the top of the Doha agricultural agenda, the size and use of the Green Box are becoming controversial. There are concerns that environmental programs are or may become covers for trade distorting subsidies.

NOTES

1. For a thoughtful layman's summary of U.S. agriculture policy, the environment and trade see Taylor. For a comprehensive economic analysis, see Runge (1999).

Chapter 1

The WTO Framework for Agriculture and the Environment

de minimis rule. The total of national agriculture subsidies (Aggregate Measurement of Support) includes a specific commodity support only if it equals more than 5 percent of its value of production. The non-commodity specific support is included in the total only if it exceeds 5 percent of the value of total agricultural output.

Amber Box Support. Government support for agriculture that is considered to be trade distorting. It includes market price support, non-exempt direct payments to producers, and other internal policies to be disciplined. Market price support is measured by the gap between domestic and world prices multiplied by the quantity supported. Support provided through non-exempt direct payments is included. Other internal policies, such as input subsidies, storage payments and interest subsidies are measured by government budgetary outlays or the revenue forgone by governments.

THE 1994 AGREEMENT ON AGRICULTURE (AOA)

The WTO's primary *raison d'être*, as its name suggests, is to promote trade. It is not charged with ecological responsibility. The basic provisions governing agriculture were negotiated in the Uruguay Round and resulted in the 1994 Agreement on Agriculture (AoA). This is but one of several constituent parts of the World Trade Organization. Within this trade oriented setting, environmental and conservation payments to farmers are subjected to conditions and limits.

To understand these constraints one needs to recognize what AoA has or has not accomplished. Although AoA limits quotas, tariffs, subsidies, and regulatory barriers, exceptions abound. Quotas are to be translated into tariffs; a process called "tariffication." Tariffs are not to be increased which means they are "bound" with present levels as ceilings. Indeed the goal is tariff reduction or elimination. Other limits on trade such as sanitary and phyto-sanitary regulations are subject to standards as well.

THE AOA'S AMBER, RED, BLUE, AND GREEN BOXES

The architecture of AoA's prohibited and permitted agricultural subsidies is a world and vocabulary all its own. AoA categorizes subsidies and, except for rather generous levels of permitted subsidies, prohibits them². The first type of permitted subsidies are those considered *de minimis*. For developed countries, subsidies up to 5% of the value of domestic production of a crop are allowed as *de minimis*. In addition, subsidies up to 5% of total agriculture production are also considered *de minimis*. These percentages are doubled for developing countries.

Subsidies in excess of *de minimis* are allowed up to a specific value determined by subsidy levels during a base period. General undefined subsidies are placed in and limited by the size of a country's so-called "Amber Box." Think of "Amber" as the cautionary traffic light. Once the limit is reached, subsidies not otherwise permitted are to stop because they enter into the so-called "Red Box" and are prohibited.

Not all subsidies in excess of 5% the *de minimis* level are forced into the Amber Box. Some are excluded from such limits as a part of either the

Blue Box or the Green Box. The Blue Box is for price support subsidies to farmers who participate in production limiting programs. Blue Box payments cannot increase above a base line. The Blue Box was primarily designed to authorize enormous subsidies that existed in the United States and the European Union at the time of the Uruguay Round negotiations. With the 1996 Freedom to Farm Bill, the United States phased out the target price/deficiency payment programs and ceased using the Blue Box. Although European countries heavily relied on Blue Box exemptions to continue many of their domestic support programs, beginning in 2002 it appears the EU is moving away from Blue Box programs.

The last major category of allowed subsidies, and the most significant exemption for environmental payments, is the so-called Green Box. As previously observed, although “green” often implies “environmental,” and although the Green Box does include some environmental programs, as used in AoA, the term Green Box simply refers to a green light or “Go” for certain categories of payments. The Green Box is established in Annex 2 of AoA³ and to be in the Green Box, exempt (allowed) subsidies must meet criteria set forth in the various Paragraphs of that Annex. Three threshold criteria apply to the entire Green Box and are set forth in Paragraph 1:

- No more than a minimal effect on trade or on production (“minimal” is not defined and is apparently different from the *de minimis* tests discussed earlier),
- Government financed; not paid by consumers, and
- No commodity price support paid to farmers.

Paragraphs 2 through 4 and 6 through 13 of Annex 2 set forth specific criteria for 11 types of Green Box measures. Although Paragraph 12 is expressly for environmental programs, several of the categories allow for some type of environmental or conservation program payments and help one understand the scope of Annex 2.

It is no accident that most existing farm programs fit within various categories, or “boxes,” and paragraphs of Annex 2 of AoA. The negotiators at the Uruguay Round were under domestic pressure to not only liberalize trade but at the same time protect the interests of their home country. The AoA categories were constructed to authorize these existing programs. Thus note: Paragraph 2 of Annex 2 accepts the inspection, research, extension, education, rural electric, and similar services of the US Department of Agriculture. Paragraph 4 covers food stamps, school lunch,

Blue Box. Direct payments under production-limiting programs, payments for crops must be based on fixed area and yields, or be made on less than 85 per cent of a base level of production. Payments for livestock must be made on a fixed number of head.

Green Box. Domestic support for agriculture that is considered not to distort production and trade. Support must be government funded and not provide commodity price support. It must also meet the policy-specific criteria contained in Annex 2 of the Agreement of Agriculture. Some examples are: research, inspection and grading, extension, marketing and promotion programs; domestic food aid; direct payments not linked to production; income insurance programs; disaster relief; and, environmental and conservation programs

SHORT SUMMARY OF TYPES OF GREEN BOX MEASURES IN PARAGRAPHS 2 THROUGH 4 AND 6 THROUGH 13 OF ANNEX 2

- Paragraph 2—Research, pest control, training, extension, inspection, marketing and infrastructure specifically includes “infrastructure works associated with environmental programs.”
- Paragraph 3—Food security, stockpiling of food.
- Paragraph 4—Nutrition programs.
- Paragraph 5—Open-ended authorization for new programs or existing programs in addition to those covered by the paragraphs of Annex 2 as long as a program complies with Paragraph 1 standards and provided it meets Paragraph 6 requirements.
- Paragraph 6—Decoupled income support:
 - Eligibility tied to fixed base period.
 - Amount not tied to production level after base year.
 - Amount not tied to prices after base year.
 - Amount not tied to which factors of production are used after base year.
 - Eligibility not conditioned on any production obligations.
- Paragraph 7—Revenue insurance and income safety net.
- Paragraph 8—Crop insurance and disaster relief.
- Paragraph 9—Farm phase out programs.
- Paragraph 10—Land or livestock retirement.
- Paragraph 11—Assistance for structurally disadvantaged farms, including privatizing collective farms.
- Paragraph 12—"Payments under environmental programmes [full text]:"
 - “(a) Eligibility for such payments shall be determined as part of a clearly-defined government environmental or conservation programme and be dependent on the fulfillment of specific conditions under the government programme, including conditions related to production methods or inputs.
 - (b) The amount of payment shall be limited to the extra costs or loss of income involved in complying with the government programme.”
- Paragraph 13—Assistance to farmers in disadvantaged regions.

Women and Infant Children (WIC) and other nutrition programs. Paragraph 8 allows for traditional crop insurance and disaster programs. Paragraph 10 covers the dairy buy out, wetland restoration, and the Conservation Reserve Program. Paragraph 12 is the unique and specific environmental provision of the Green Box. For the United States, the Environmental Quality Incentives Program (EQIP) was developed and enacted at about the same time the Uruguay Round was completed. EQIP fits with Paragraph 12.

THE GREEN BOX: AN IMPERFECT FIT FOR CONSERVATION PROGRAMS

The larger challenge, and the purpose of this study, is determining how well these provisions accommodate programs that are considered necessary to adequately address environmental and conservation problems. Since Paragraph 12 of Annex 2 and the other provisions of the AoA are brief, and since the Green Box specifics are open ended, the context in which they were drafted is crucial to their understanding.

Agreements that make up the WTO and the provisions of many global conference reports are replete with language that recognizes the importance of the environment⁴. The preamble to the AoA notes that a market-orientated trading system is to have “regard to non-trade concerns, including... the need to protect the environment.” Article XX of the initial 1947 GATT recognizes that nations reserve powers to adopt and enforce measures related to a range of public policy matters including ones:

- (b) necessary to protect human, animal or plant life or health;
- (g) relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption.

Prominent references to the environment are contained in the call for the new Doha Round negotiations and international agreements. All of the above is unequivocal evidence that the WTO and the AoA should, and indeed theoretically do accord environmental considerations a high degree of respect in its decision-making and dispute resolution process, and should facilitate and advance agri-environmental efforts. The Green Box should be interpreted as environmentally friendly.

However, the fit between what some would like to do and what the Green Box accepts is not perfect. There are ambiguities, uncertainties and possibly limits. Identifying that fit and the problem areas is the purpose of

Conservation Reserve Program. This U.S. program compensates landowners for commitments to retire tillable land for at least 10 years. This program covers close to 35 million acres, is slated for expansion to 39 million acres, and costs the U.S. government about \$ 1.7 billion per year.

Environmental Quality Incentives Program (EQIP). This U.S. program provides farmers with grants and advantageous loans to cover part of the cost of complying with regulations on livestock management, and of implementing improved cropping practices in water-protection priority areas

the next section of this analysis. At the same time, different countries, blocks of countries and NGO's are looking for specific adjustments in the Agreement on Agriculture. As detailed earlier, the key players appear to be in camps: developing countries who can export agricultural products, developing countries which are not self-sufficient in agricultural products, the European Union, the Cairns Group, the United States, and the friends of multifunctionality. Each has a potentially different idea of what should be done with respect to the Green Box and payments to farmers for environmental/conservation programs.

THE DOHA ROUND – PLAYERS AND PERSPECTIVES

The Doha Round is an opportunity to resolve problems with prior WTO agreements and to resolve current and anticipated trade disputes. Concern for the environment and trade distorting agricultural subsidies are two prominent issues that are major challenges for the Doha Round. Recognizing the perspectives of various countries or blocks of countries is helpful in understanding how to approach this challenge at the Doha Round.

The European Union/Friends of Multifunctionality

In addition to EU, this grouping includes Japan, Norway, Switzerland, South Korea, Iceland and similar countries. The friends of multifunctionality and to a lesser extent the European Union are probably the most “green” or environmentally oriented and the most willing to invest substantial resources in environmental programs. At the same time they have a history of massive subsidies to farmers, of highly trade distorting practices and of the most intensive, environmentally threatening farming. If they are able to redirect much of their agricultural spending toward environmental programs that are not trade distorting, it would be a stunning accomplishment. It appears the EU has made a serious start. Norway, Japan and Switzerland profess a parallel commitment. South Korea is more uncertain. At Doha, these countries should be providing leadership. developing countries which are not self sufficient in agricultural products, the European Union, the Cairns Group, the United States, and the friends of multifunctionality. Each has a potentially different idea of what should be done with respect to the Green Box and payments to farmers for environmental/conservation programs.

The United States

The United States shares many of the same interests as the EU. However, domestic politics indicates that the political support for restructuring the

farm programs toward environmental and conservation goals is limited. Many of the agri-business and commodity interests depend upon the current high subsidy programs for cheap products. It is a strange alliance. Conversely, significant parts of the environmental community object to any subsidies to farmers that have any polluter gets paid side. They want a better environmental return on the subsidy dollar. In between is a modest sustainable agriculture community, a conflicted Administration, and a divided Congress. USDA officials recognize the challenges and opportunities involved in restructuring agricultural programs. However, the domestic political debate was driven to find compromises to pass a farm bill and is only faintly cognizant of the WTO and the Doha negotiations. Domestic politics is far more important.

The Cairns Group

The Cairns Group is committed to dismantling the huge subsidy regimes that qualify for various boxes. They see them as trade distorting and as robbing the major exporting countries of opportunity in the international market. They understand the justifications for environmental and conservation programs, can be supportive, and yet are suspicious that green payments will have trade distorting effects.

Food Exporting Developing Countries

The food exporting developing countries are cynical. They lack the resources to pay their farmers for environmental and conservation practices. They fear their farmers will be marginalized by regulations, standards, import restrictions, and other limits imposed by developed countries and that any subsidy programs of developed countries will simply continue and may compound the inequities. For these developing countries, the rich Northern Hemisphere uses its financial muscle to protect its farmers and leaves farmers in developing countries at a severe disadvantage. The developing countries do not trust the developed countries to design and implement conservation and environmental programs that are fair. The developing countries feel they lack the capacity to monitor and enforce whatever agreement is written.

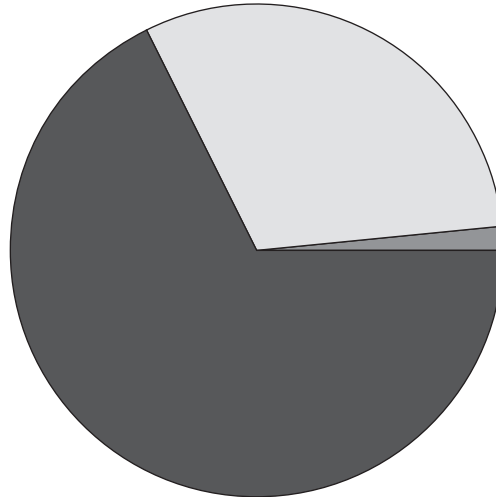
Non-governmental Interests: Development, Environment, Animal Rights, and Businesses

Finally, there are the non-governmental interests. They represent every perspective. Foundation resources will give developing countries and environmental and animal rights groups a strong presence at Doha. Agri-busi-

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OECD COUNTRIES 1995 FARM PAYMENTS (U.S. BILLIONS)

■ Other Subsidies/Tariffs ■ Green Box ■ Agri-Environmental



ness and commodity groups will be prominent. The diversity and role of these groups is hard to predict.

NOTES

2. See attached tables
3. The text of Annex 2 is set forth as an appendix to this paper.
4. Given the voluminous literature on the importance of environment issues, this paper does not develop this point further. For a recent, comprehensive discussion see Morici.
5. *Argentina, Australia, Bolivia, Brazil, Canada, Chile, Colombia, Costa Rica, Fiji, Guatemala, Indonesia, Malaysia, New Zealand, Paraguay, Philippines, South Africa, Thailand, Uruguay*

Current Farm Conservation Subsidy Programs

CONSERVATION RESERVE PROGRAM (CRP)

Several types of environmental/conservation programs have emerged or been proposed in recent years in the U.S. and the E.U. In the United States, the largest have been aimed at land retirement. The best known is the Conservation Reserve Program (CRP). It compensates landowners for commitments to retire tillable land for at least 10 years. This program covers close to 35 million acres, is slated for expansion to 40 million acres, and costs the U.S. government about \$ 1.7 billion per year. At the proposed level, the CRP will cover close to 12% of the tillable land in the United States. More land is offered for participation in the program than can be accepted.

The CRP uses an Environmental Benefits Index and a bidding process to determine what land is enrolled. The landowner bids a rental payment rate and offers to implement certain management practices during the ten year contract. Based upon erodibility, habitat, rental rate and other factors, the land is assigned a score. The land is then accepted into the program based on its score on the Environmental Benefits Index compared to the score of other land.

ENVIRONMENTAL QUALITY INCENTIVES PROGRAM (EQIP)

The second largest agri-environmental program in the U.S. is the Environmental Quality Incentives Program (EQIP), which provides farmers with grants and advantageous loans to cover part of the cost of complying with regulations on livestock management, and of implementing improved cropping practices in water-protection priority areas.

WETLAND RESTORATION PROGRAMS

A third type of program is wetland restoration, which provides farmers with technical services and pays part of the cost of modest structures to re-establish wetlands.

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CONSERVATION SECURITY PROGRAM (CSP)

Established in the United States 2002 Farm Bill, the Conservation Security Program is a visionary new approach to agricultural policy. It will provide payments to farmers to encourage stewardship on working land. It is not land retirement. In many respects it parallels environmental and conservation programs that are emerging in the European Union as a part of the so-called Second Pillar of the Common Agricultural Policy.

Participation in the CSP is voluntary. Farmers agree to a level of environmental and conservation measures in their farm's operation. The agreements will cover up to ten year periods and would be at a Tier I, Tier II, or Tier III level depending upon how far-reaching the practices. The goal is to improve water quality, reduce topsoil loss, enhance wildlife habitat, and improve air quality. It seeks to encourage extensification and discourage intensification in farming. It is expected that farmers will be able to implement stewardship practices that might otherwise be economically impossible.⁵ The farmers will be paid an amount determined by the tier for which they qualify, the nature of their commitments, the size of the farm, and whether certain special conditions are present. The CSP provides for an annual maximum payment per farmer based upon four factors:

- **Tier level:**
 - Tier I (modest conservation practices) maximum - \$20,000
 - Tier II (Moderate) maximum \$35,000
 - Tier III (more aggressive) maximum - \$45,000
- **Base Payment:**
 - Depending on tier, between 5% and 15% of a national farm land rental rate; limited to 30% of annual payment.
- **Costs Payment:**
 - 75% of cost of new and qualified existing conservation practices (90% for beginning farmers).
- **Enhanced Payment** (determined by the Department of Agriculture for):
 - Special conservation practices that go beyond the minimum tier requirements,
 - Local conservation priorities
 - Research demonstration, pilot projects
 - Participation in a watershed plan, Record keeping and evaluation, and
 - Earlier drafts of the CSP included an advance payment that was a signing bonus or an incentive. Although this payment was deleted

from the final bill, the concept is important to evaluate. Incentive payments exist in some farm programs in Europe and may be included in the CSP or other U.S. programs in the future. The sign up incentive in the CSP as it existed when the United States Senate passed the bill will be used for illustrative purposes in this discussion.

DUTCH GRASSLAND BIRD NEST PROGRAM

Another illustrative program is the Dutch “Natuur” program, which is designed to protect the nests of grassland birds. In 2001, Dutch farmers were paid between 50 guilders and 250 guilders for each protected nest depending upon the rarity of the species. This program has proven popular with farmers and the public.⁶

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6. Examples include constructing new drainage intakes that reduce top soil loss, leaving filter strips, planting cover crops, constructing terraces, using minimum tillage or no-tillage techniques in farming, implementing rotational grazing, diversifying the cropping patterns to improve soil quality, and leaving marginal land for wildlife habitat.

Stress Points for the WTO and Conservation Subsidy Programs

It is difficult to forecast all the features of environmental and conservation programs that may be necessary to meet global and local stewardship challenges. The five programs summarized are examples of programs. Their fate in the WTO process is instructive of how well the WTO accommodates the conservation/environmental agenda. As noted earlier, the WTO's Annex 2 was drafted with an eye on existing programs. CRP, EQIP, and wetland restoration fit easily within the Green Box. However, CSP and the Dutch Grassland Bird Nest Program are awkward and raise issues regarding payment of bonuses, rental payments on producing land, and payment for benefits – all payment factors that go beyond traditional “cost” and “loss of income” standards for payments to farmers.

This paper next turns to consideration of payment formulas that go beyond cost and to consideration of multifunctionality, splitting programs, partial land retirement, the polluter pays principle, and animal welfare standards. In the contest of this discussion, there are three perspectives to keep in mind:

- the challenges of technical WTO compliance
- the logic and economics of the current WTO provisions
- the larger policy problems the global community must address in structuring ground rules for effective and fair environmental and conservation programs that provide subsidies to farmers

THE COST REQUIREMENTS

Recall that Paragraph 12 of Annex 2 of the AoA only authorizes payments based upon cost considerations. Thus, a significant challenge in meshing the CSP with the AoA is that land rental payments, bonus payments, and benefit payments have all been a part of the CSP proposal. Benefits are also the key factor in the Dutch bird nest program. Some other programs also include sign up incentives or bonuses. The question is: How flexible is the cost limit in the AoA and the Green Box?

Incentive Payments/Sign-Up Bonuses

The first problem with the application of Paragraph 12 of Annex 2 to the types of payments discussed above lies with the sign-up bonus. The AoA makes no explicit allowance for such bonuses. However, it is often difficult to convince farmers to participate in a new program. There is suspicion of the government and reluctance to sign up for something new. Beyond overcoming this suspicion, the farmer will face the time and expense of learning about a program, preparing a plan or application and working through the approval process. This could take anywhere from a few to hundreds of hours and include consultations with lenders, accountants, lawyers, and others. Unless there is a clear incentive, farmers, like most people, will wait until confident of how a program will work. This may take several years. The sign-up bonus then acts as and should be viewed as a type of transaction cost, getting farmers to participate in such programs (and compensating them for any lost opportunities).

The provisions of Paragraph 12 that approve payment of costs should therefore be interpreted to include the sign-up bonus payments as transaction costs. The European Commission reached this conclusion in adopting Article 24 of Council Regulation EC1750/1999. It authorizes member countries that participate in conservation programs to pay an initial bonus of up to 20% of the annual payment. The EU Ministry of Agriculture classifies these payments as motivating incentives. Although 20% is the maximum and incentives at that level are apparently rare, payments of up to 10% are found in conservation programs of several European countries. Environmentalists also appear to support such motivating payments as necessary to stimulate participation in programs.⁷ The question is whether such payments are WTO compliant.

Allowing for incentive payments as “transaction costs” under the WTO

The best interpretation of the WTO Green Box should allow for the bonus as long as it is modest, bears some relation to the amount of time and expense farmers are apt to invest in signing into a new program, and is not trade distorting or preferential. In this regard, the proposed CSP signing bonus was a one-time payment. It was modest at the minimum level – \$1,000, \$2,000, up to \$3,000 depending upon whether the farmer were to enroll in Tier I, Tier II or Tier III of the program. The higher Tiers require more aggressive conservation practices. The bonus ceiling was 20% of the annual payment. In Tier III, with a maximum payment of \$50,000, this sign up bonus could have been as high as \$10,000. Although substantial, when averaged out over the five years of a contract and when averaged

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with payments to all participants, it is not unlikely that the typical payment would be equal to the median, fully distributed transaction cost.

The fundamental question should be whether such an incentive payment has any trade distorting impact. Subject to the resource disparity issue with developing countries and the generalized farm subsidy issue, both of which are discussed below, it is difficult to identify a material, trade distorting impact from the sign up incentive. As previously observed, the transaction cost concept probably offsets any economic advantage. Furthermore, a program like CSP is not an intensification program; it encourages extensification in farming. This diminishes the production of agricultural goods and creates opportunities for farmers in other countries.

As long as an incentive payment is available to all participants on transparent terms, there is no preferential treatment. This avoids the risk of mischief that characterizes bonuses in some programs. Also, incentive payments appear reasonably necessary to interest farmers to participate in voluntary environmental programs. Finally, recall the various statements in WTO-related documents about the importance of environmental considerations. There is a global policy to advance environmental protection. Paragraph 12 of Annex II should be interpreted liberally to achieve that objective. Incentive payments should be WTO compliant.

Environmental benefits of extensive farming

Indeed, the WTO ought to welcome the extensification dimension of programs like CSP. The public subsidy is nominal compared to the massive amounts spent on the income subsidies. As previously discussed, the CSP subsidy will not stimulate more intensive farming. If anything, it should reduce production by the American farmer. This increases opportunity for farmers elsewhere in the world. Perhaps the key test is whether the overall effect of the program appears to correct environmental problems that are not otherwise addressed, or merely protects local farmers from international competition. The incentive payment or signing bonus does not appear to violate this practical net effect standard.

Land Payments/Decoupled Payments Under the WTO

The CSP provides for a land rent component in its payment. This author is not aware of any parallel for this type of payment in the European Union or in any other member country programs. Flat rent type payments are not authorized by Paragraph 12, the specific environmental provision of the Green Box. Similarly, Paragraph 10 of Annex 2 is not a good fit for the CSP rent style payment. Paragraph 10 requires land retirement. In a sense,

any environmental program provides for less intensive farming, which could be seen as retirement of some undefined portion of the productive capacity of the land resource. However, given the requirement in Paragraph 10, “clearly defined criteria... designed to remove land,” it appears the better reading is that the CSP would not fit with the Paragraph 10 part of the Green Box.

The Green Box coverage of conservation programs is not limited to historic and obvious programs. The paragraphs in Annex 2 that are highly specific do not constitute a closed list. Paragraph 5 authorizes existing or new subsidy programs that are not specifically listed in Annex 2. It directs one back to the general criteria of Paragraph 1 and forward to the last four criteria in Paragraph 6. The Annex takes the “included but not limited to” style of listing permitted activity. Anything that meets the tests set forth in Paragraph 1, and relevant parts of 6, and is not at war with any consistent theme in the specific examples of the other paragraphs of Annex 2, should be allowed. The issue then is whether land rent based payments will fit within Annex 2.

Paragraph 1 of Annex 2

The task is to look at the specific provisions of the individual paragraphs. First, note that Paragraph 1 establishes a three part test:

- At most minimal trade effect on trade and production
- Government financed; not paid by consumers
- Not commodity price support paid to producers

Clearly, the last two criteria are met. The payment comes from the government and is not a form of price support. The first criterion related to effects on production could be an issue. This production effect may arguably occur if the payment encourages more intensive farming or if the extra money it provides farmers has a stimulative effect for more intensive farming on remaining land. Note that this question of whether the availability to farmers of unrestricted money will lead to increased production is inherent in all decoupled payments and, as such, goes to the core of the structure of the green box. A common perception in rural areas is that farmers will unrelentingly spend all available resources in an effort to wring as much income out of their farming operation as possible, ignoring all other economic opportunities. In a market economy this means “produce more.” An oft hear comment is that farmers farm until they go broke.

The WTO should proceed very slowly in accepting such a notion of farmers’ unending inclination to intensify production for two reasons.

First, to assume farmers will use more money to increase production is inconsistent with the basic economic theory that underlies decoupled payments in Annex 2. Although farmers may be loyal to their way of life, and use any available resources to cross subsidize and intensify their operations, they will ultimately use available resources to their advantage. If a better return exists outside of farming or from less intensive farming, decoupled resources will be so invested. To be sure, there will be anecdotal exceptions. But these exceptions do not necessarily establish a contrary rule.

Second, in evaluating any distortion effect from the CSP land rent payment, one should look at their context in the specific program. If the program is transparent, has a bona fide environmental purpose, and its net effect is to reduce production, the decoupled payment should be acceptable. The land rent portion of the overall payment formula should not have trade distorting effects or stimulate production.

Paragraph 6 of Annex 2

Although it is tempting to say the CSP rent payment complies with the Agreement on Agriculture, the Green Box is not so simple. The criteria of Paragraph 6 must be applied. These have already been individually identified.⁸ At this point, note that CSP rent will not be based on production or prices. Thus those criteria do not pose a problem. However, recall that Paragraph 6 includes the following additional criterion: payment must not be tied to the “factors of production employed.”

The question is whether an environmental/conservation program which conditions part of the payment on the number of acres in the program, would be understood as basing payment on a “factor of production employed.” Neither Annex 2 nor the Agreement on Agriculture defines the phrase “factor of production employed.” However, note that decoupled payments are conditioned on land ownership and it is generally assumed not to be a “factor of production.” If in designing the CSP and other environmental programs there is no requirement that any farming occur but only that certain conservation practices be observed, then these newer programs should be as Green as the decoupled payment in the 1996 Farm Bill popularly known as Freedom to Farm. Although it may violate common sense to say land is not a “factor of production,” this inconsistency inhabits the terms used in the Green Box and should be clarified.

Furthermore, it is helpful to contrast “factors of production” with production methods. Indeed, Paragraph 12 uses the phrase “production methods.” Methods would be items like cultivation and grazing practices, drainage, chemical and fertilizer usage and application and similar specific

practices. In the last analysis, CSP standards are designed to preserve top-soil, minimize water pollution, protect wildlife habitat, and meet similar goals. These are outcome standards. Any factor of production can be used as long as there is an environmentally beneficial outcome. The “method” of production may change to meet these standards.

The last part of Paragraph 6 is the prohibition on requiring production. Although the CSP is called a program for “working” land, no actual production is required. No factor of production need be employed. It is the farmer’s call. He can leave the land fallow if he so chooses.

Viewing agricultural programs as a whole (the overall impact of the CSP)

In sum, the best basis for approving the land payment factor in the CSP appears to be a broad reading of Paragraphs 1, 5, and 6 of Annex 2. However, this one payment factor should not be viewed in isolation from the rest of the CSP. The totality of the program is important (this consideration is further explained below). Also, one must ask if this “rent” type payment is offensive to trade, is apt to mask trade distorting subsidies or is hard to police. Furthermore, it must be determined if this feature of the payment arrangement is critical to the program’s success. Annex 2 should be clarified in the Doha Round to permit or prohibit rent type payments.

Payment of Benefits: Unaccepted Under WTO regulations

The CRP, the recently passed CSP, the Dutch grassland bird nest program, and many others at least partially base the determination of how much is paid to the farmer or landowner on the environmental benefit that the farmer or landowner provides. The nests of some rare birds are valued five times higher than more common birds. This use of benefits as a touchstone for compensation has no necessary tie to the cost the farmer/landowner incurs by engaging in the conservation practice. In fact, with the bird nest program there is no apparent difference in cost.

Similarly, in the CSP, bonus or “enhanced” payments are in addition to cost. Since there is no separate ceiling, this part of the annual payment could be 50% or more of the total received by a farmer.

Paragraph 12 of Annex 2 of the WTO does not accept benefits as a legitimate criterion for payments to farmers. Whether this was a deliberate or accidental decision is unclear. However, the European Union Commission has quite deliberately declined to allow environmental benefits to be used as a basis for payments in the Common Agriculture Policy. It has turned down the Dutch grassland bird nest program and others for EU financial support for this reason.

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Benefits in payments as incentives for participation

The “benefits” issue is fundamental. Clearly, cost is only one factor in determining price in the marketplace. Demand is driven by the benefit that the purchaser or customer perceives is received in a transaction. To treat environmental and conservation programs differently and prohibit nations from recognizing benefits when they pay farmers for practices is unrealistic. Somehow, the benefit factor will creep into the transaction. Perhaps cost will gradually be driven up until an equilibrium is reached. In any event, this effort to defy the reality of benefits without a WTO explanation or justification is curious.

There are possible rationales that can be furnished for the current language of Paragraph 12 of Annex 2, which only recognizes cost. One is the difficulty of calculating benefits. Unless there is a market arrangement, how does one rationally decide on the benefit. The Dutch grassland bird nest program seems to have arbitrarily assigned values to different types of nests. This may invite abuse within countries that will favor certain types of agricultural situations and become a cover for subsidies that in the end stimulate more intensive farming or crop production. Such a stimulating effect could potentially be trade distorting. Also, the benefit determination may not have the transparency of a cost based calculation. Or, the benefit approach may create a moral hazard. Are Dutch farmers tempted to steal favored bird nests from neighbors’ lands or to construct nests for phantom birds?

Using a market/auction system to resolve the ‘benefit’ hazard

One way of resolving the ‘benefit’ hazards is a market or auction system.⁹ In the United States, the CRP program uses a massive national auction in the periodic general signups. For each signup the USDA constructs an Environmental Benefits Index to rank bids. This was initially controversial due to the weights assigned to different factors and perceived regional biases. However, the index concept has become an integral part of CRP and is recognized as a rational approach to determining participation.

A careful analysis of Paragraphs 1, 5, and 6 would quite possibly allow the benefits bonus or enhanced payment. It should be no more than minimally trade distorting and it is no more in violation of the factors in Paragraph 6 than the land rent payment. Another approach to authorizing the rent or benefit payment factors is to try to identify costs not otherwise covered by a program and hope the benefit factor payment only offsets the uncompensated cost. Indeed, most programs are unlikely to be so generous as to cover all costs. A creative or thorough cost analysis may resolve the problem just like the “transaction cost” concept may cover sign up incentives.

Costs of environmental programs dwarfed by other trade-distorting subsidies

Also, it is noteworthy that trade distorting subsidies of an enormous size are allowed under WTO. The so-called Amber Box payments, the Blue Box payments, and Green Box decoupled payments authorized under Paragraph 6 of Annex 2 dwarf any “rent” or benefit” based conservation/environmental payment. Some may assert that given the size and likely trade distorting potential of other WTO permitted payments, the problem with any bonus payment to farmers for environmental and conservation practices is inconsequential. Would any country care to go through the effort of a WTO challenge for such a small offense? If progress in reducing trade-distorting payments is desired, nations may be more effective in doing so by simply scaling back the larger payments without any environmental rationale.

Solutions

Assuming there are problems fitting the forgoing payment features in one of the paragraphs of Annex 2, the next consideration is what further analysis may be helpful in dealing with the problem. Several considerations are important:

Peace Clause: Protection for current programs

It is noteworthy and curious that the Uruguay Round Agreement on Agriculture includes a so-called “Peace Clause.” It stipulates that until the end of 2003, no complaints are to be filed over violations of Green Box programs. However, it is noteworthy that Article 13 of the Peace Clause is less a prohibition than a limit for actions against programs that apparently comply with the WTO. In any event, this limitation is expiring at the end of 2003. Thus it is of transitory value.

Amber Box

Even if payments are classified as offending subsidies there is the possibility of simply treating payments beyond cost as being in the Amber Box. After all, the WTO does not prohibit trade-distorting subsidies; it limits them to the size of each nation’s Amber Box. Thus this Amber Box approach is possible. However, it is controversial as well as galling to have an environmental program so treated when the United States, from the perspective of some critics, is already close to its Amber Box limit. Thus, any program added into the Amber Box may push payments over the limit and cause a WTO violation. More fundamentally, the WTO ought to be compatible with bonafide environmental programs. Either the WTO’s definition of what is acceptable or the program should change.

Resorting to the Amber box solution is risky for yet another reason. The Amber Box may disappear. Trade advocates, the developing countries, and the Cairns Group are critical of the very existence of the Amber Box and its size. It is not compatible with a level playing field in international commerce. Thus to pin long term WTO compliance for environmental and conservation programs on adding them or parts of them to the Amber Box is a precarious and unfavorable solution.

Splitting programs for compliance

The foregoing discussion of the paragraphs of Annex 2 and of the various colored boxes raises the issue of splitting programs into two or more parts to come within different WTO rules. The question is whether for WTO purposes programs must be entirely in a single category or can they be divided so that parts of the program cost can be authorized by two or more paragraphs of Annex 2 or split between the Green and Amber Box? One approach would be to just use the Amber Box for that incremental amount that is tied to “rent” or “benefits” under CSP. This way, Paragraph 12 of the Green Box covers CSP “cost” payments. Apparently, Canada took this approach with respect to a Quebec program in the 1990’s. Canada notified the WTO that part of a program was within the Green Box, conceded part was outside the Green Box and put that portion in the Amber Box. The WTO is not clear that this allocation can be done.

Perhaps it depends on whether the program has discrete and severable parts. This is a type of transparency that facilitates analysis. In such a case, severability makes sense. However, if this severability is not present, or if it is not accepted, then the entire program goes into the Amber Box. Should that happen, there is a greater risk the Amber Box limit would be reached. This would be an unwanted result for what was expected to be a WTO compliant program.

Net Effect and the Cost Test: Trading flexibility for transparency

In addition to splitting a conservation or environmental program between boxes or paragraphs of Annex 2, programs may be made to fit within the constraints of the WTO by careful analysis of the program and determining its aggregated or net effect. This is especially apt in programs like CSP where the language in Paragraph 12 limits payments to cost. The goal would be to keep total payments to all farmers less than their total costs. As long as the total aggregated payments are less than the total costs, and there is at most a minimal trade distorting impact, the program should meet the Green Box requirement. This interpretation of Paragraph 12 is a

way of giving the “minimally trade distorting” language of Paragraph 1 of Annex 2 meaning. Otherwise, requiring that a program comply with Paragraph 12 with respect to every farmer who participates, makes paragraph 1 provisions largely irrelevant. After all, how could there ever be an effect on trade or production if for every farmer only his individual farm costs are at issue? Only when the economic effect of thousands of farms receiving payments in excess of cost or less than cost are netted, can the possible trade or production effect be evaluated. With this approach, there is a better chance that the cost test can be met.

In discussions with European Union personnel, it appears that they take this aggregating approach. This is attractive because calibrating to insure that each aspect of each payment to each farmer complies would be very difficult. In this fashion, greater flexibility can occur in designing and implementing programs. However, in taking this approach, there is less transparency and greater risk of abuse in designing programs.

MULTIFUNCTIONALITY

This aggregating proposal brings one to the subject of multifunctionality. Norway, Switzerland, Japan, South Korea, and to a lesser extent the European Union have argued that agricultural programs may simultaneously advance several goals. For example, Norway provides subsidies to small farmers in mountainous regions. Without these subsidies the farmers would cease operation and the land would no longer be used for agriculture production. The functions of this farm program are to provide the Norwegian farmer with an adequate income, keep people in rural areas, preserve the rural landscape with certain agricultural attributes, assure the Norwegian people of a local supply of food, continue the cultural heritage of the regions of the country, and protect the environment. Norway is a key advocate of multifunctionality. This perspective strongly opposes limiting the government payment that finances all these benefits to the cost to the farmer of certain conservation practices. The friends of multifunctionality have argued that for all such benefits a larger payment is justified and that it is overly burdensome, unnecessary and unrealistic to split payments and programs into numerous discrete parts for each function.

Annex 2 does indeed cover several features of multifunctionality. Not only does Paragraph 12 address environmental and conservation programs, but Paragraph 13 deals with rural assistance for economically depressed areas, Paragraph 11 addresses “structurally” disadvantaged farmers, while Paragraph 10 addresses retirement of farm land for reasons which are often environmental, but can also be aesthetic. Advocates of multifunctionality

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assert they need the flexibility to have programs that cross categories and are judged in the aggregate. Unless that is done, programs would undoubtedly substantially exceed the definitional limits on payment and violate criteria of each paragraph of Annex 2. For this reason, the multifunctional advocates argue for greater Green Box flexibility in designing programs.

Unfortunately, such aggregation makes transparency more difficult to achieve and production-distorting subsidies may creep into such multifunctional arrangements. They may both adversely affect trade opportunities of other countries and lead to more intensive agriculture that compromises the environment. For this reason the United States and the Cairns group of countries oppose multifunctionality. A complete analysis of multifunctionality has been undertaken by several scholars and is beyond the scope of this project.¹⁰ Suffice to note this is a tricky subject as indicated by one scholar's suggestion of the term "multidysfunctionality."¹¹ A recent Minnesota study explores the different payment approaches and quantifies the benefits.¹² Multifunctionality is certain to come up at the Doha round of WTO negotiations.

PARTIAL RETIREMENT

Another dimension of the popular Conservation Reserve Program (CRP) in the United States that raises a WTO compliance question is limited use. Historically, haying and grazing has been allowed in any year in which there is a shortage of forage due to a disaster situation as determined by the Secretary of Agriculture. In the 2002 Farm Bill it appears that at the owner's discretion such haying and grazing will be an optional use of land every year, subject to an appropriate reduction in the annual government payment.

The CRP has usually been considered as falling under Paragraph 10 of Annex 2. The provisions of Paragraph 10 require a three-year set aside. There is no mention of alternating years or partial land retirement. Presumably, the CRP did not run afoul of the WTO because on a national averaging basis the land would be fallow at least 3 out of the 10 year contract term. However, such an averaging calculation may be a challenge to monitor. Alternatively, it may be possible to fit the CRP within Paragraph 12 of Annex II. Indeed, the retirement of the land is for conservation purposes, and payment is roughly tied to the cash rent that could have been received if the land were farmed, plus all or part of the cost of special practices like planting trees or native prairie grasses. This is the loss of income, and this is an ascertainable economic cost. Coverage of the CRP with the Green Box should not be a difficult trade issue.

OPEN SPACE AND STATE PROGRAMS: KEEPING AGRICULTURAL LAND FROM DEVELOPMENT

Farmland protection and open space programs are popular. The goal is to protect agricultural land from development. Part of this effort is private with land trusts being established for this purpose. Another part is governmental with the public paying for such easements or, as is more commonly the case, providing favorable tax treatment. It does not appear that the United States Department of Agriculture attempts to report the full range of such (or other) payments made to farmers by the various states to the WTO. Although a catalogue of such programs is beyond the scope of this study, they are as much subject to WTO obligations as federal programs.

Re-invest In Minnesota (RIM)

Two examples of state programs from Minnesota illustrate the challenge. One is a land retirement program named Re-invest In Minnesota (RIM). This is similar to CRP at the federal level; however, it is more targeted at habitat restoration, is for longer periods – including permanent retirement of land from farming – and larger bonuses are paid to farmers/land owners.

Property tax adjustments

The other type of program is property tax adjustments. Tax credits and property tax relief are types of subsidies covered by the WTO. In several states there is a tax reduction when a commitment is made not to develop land. Such programs may face two problems. First, are the foregone development rights a “cost?” Second, if it is a cost, the actual cost is not easily calculated. Although the diminished land value from foregoing development opportunities should be greater than the amount of the tax relief, there is no assurance that this is the case. (Property tax relief may be used in other ways. Minnesota has occasionally reduced real estate taxes on farmland to help farmers through an economically tough year.) The point is that when state and local units of government are considered hundreds of programs across the country provide subsidies that have environmental and conservation objectives. Some of these programs are difficult to fit within the language of any paragraph of Annex 2.

ANIMAL WELFARE – OVERLOOKED BY THE WTO

The Agreement on Agriculture recognizes environmental, conservation, food security, nutrition, income protection, and regional assistance programs as appropriate for governmental subsidies within the Green Box.

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However, there is at least one other perspective that is seeking recognition. That is the animal welfare movement. The issue is not new. The Tuna/Dolphin controversy was a United States effort to protect dolphins. However, the subsidy approach is new.

A recently published analysis of egg production and the phase out of battery cages in the European Union countries and in Switzerland details the type of cost differentials that are faced by producers and recommends trade measures to offset these differentials.¹³ It does not appear that the Green Box or WTO generally allows for such subsidies.

POLLUTER PAYS VS. GETTING PAID

One basic issue that WTO does not address is the status of the Polluter Pays Principle. It is widely recognized that each entity that pollutes should bear the cost of its behavior and clean up any damage it has done. OECD took this position in 1974. Principle 16 of the Rio Declaration states that "...the polluter should, in principle, bear the cost of pollution..." The cost of responsible environmental conduct is then a part of the cost of doing business and is included in the price of the product. This is what has usually occurred with point source pollution in the private sector. The contrasting approach would pay polluters to clean up their activities. Occasionally, the influence or importance of the polluter, the cost of clean up, property rights of landowners and the politics of the situation will result in a polluter being paid. Federal assistance for municipal wastewater treatment clean up efforts and the livestock facility payments in the agricultural program known as EQIP are examples in which the polluter gets paid. The question needs to be asked if the Green Box should recognize the polluter pays principle.

Different standards and resources leading to different approaches and competitive disadvantages

Considerations of global economics enter into whether the polluter pays or gets paid. This arises if standards in one nation are higher than most others. Should that be the case, paying farmers for environmental and conservation measures is a way of leveling the playing field. There is also the problem of what should be done with respect to farmers in areas that ought to clean up their operations to avoid imposing the impact of their polluting activities beyond their borders. Another dimension is that developing countries rarely have adequate resources to pay their polluters. If different countries proceed differently, farmers who voluntarily clean up their operations will usually be at a competitive disadvantage.

Rumination over the inequalities arising from these disparities haunts farmers. In the United States, many allusions are made to the difficulty of trying to compete with farmers in Brazil or other countries that enjoy favorable farming conditions and are perceived to have few if any environmental restrictions. Studies indicate the economic impact of such disparities is significantly less than is popularly believed.¹⁴

Another Approach: Payment for the production of benefits

Another approach to the polluter and payment is to shift the analysis to production of benefits. It is not “pollution” to cultivate land that could be wildlife habitat. Certainly a farmer has the legal right to use his land for normal crop and livestock production. If he voluntarily gives up such use for the benefit of wildlife or to prevent wind or water erosion, that farmer is providing a public good or benefit for which he may reasonably be paid. This recasts the discussion of whether the polluter is being paid to whether good conduct is being rewarded for special benefits enjoyed by the larger society. Of course, the situation is complicated by the coincidence that promotion of wildlife habitat also may reduce topsoil erosion and reduce water pollution.

Property rights need to be analyzed and defined to determine whether the property owner is giving up something of value to produce a benefit to the larger community. Or, is the situation such that if the property owner did not so manage his or her land, the owner would be acting irresponsibly and imposing costs on neighbors? To an extent this is a matter of perspective. However, careful analysis can help minimize the scope of dispute over whether it is a “polluter” situation at all.

The European Union: Paying only for added benefit and reducing environmental expectations

In the European Union, the Second Pillar of the Common Agriculture Policy is mildly inclined to follow the Polluter Pays Principle. Farmers are not paid for simply adhering to usual good farming practices observed in a region. Furthermore, as a part of this baseline, payments with EU funds are not allowed for practices necessary to comply with laws or regulations.¹⁵ Farmers are not to be paid for simply doing what they are required to do. An EU source told this author that adherence to this rule resulted in reconsideration of high standards in some member states. For example, changing mandatory standards to recommended goals apparently allowed Swedish farmers to be paid for certain environmental and conservation practices designed to meet the goals. Absent such a rollback, the Swedish farmers could not be so paid with EU funds.

The United States: Mixed history on the Polluter Pays principle

In the United States this situation is mixed. As a result of cross compliance requirements, farmers who participate in federal farm programs have been required to adhere to the limits of Swamp Buster and Sodbuster and must develop plans to minimize the loss of top soil on highly erodible land. There is no direct compensation for such limits. The benefits of federal farm programs economically push farmers to comply with these conditions. This is in effect an indirect application of the Polluter Pays Principle in a conservation setting.

U.S. farmers are eligible for financial assistance through the USDA's EQIP program to meet the Clean Water Act requirements that the federal Environmental Protection Agency and state counterparts place on livestock operations. Although this is a polluter gets paid process, EQIP was enacted because of expectations that many farmers were not financially capable of complying with tough standards. In the 2002 Farm Bill, EQIP is being expanded to cover industrial scale livestock operations that originally claimed that they did or could meet all environmental standards. Thus it appears that all livestock operations in the United States benefit from the polluter gets paid approach.

The Conservation Security Program (CSP) is mixed on this subject. Tier I, which is the basic level for participation, requires farmers to follow standards established in National Handbook Resources Conservation Service (NRCS) with respect to at least one basic resource such as soil or water. This threshold is low. The higher levels of participation – Tiers II and III require more of farmers.

Some argue Tier I is too easy – little or no action above the norm is needed to obtain payments. Not only is the polluter getting paid, but from the critics' perspective, scarce environmental and conservation budget resources are being spent for baseline activity. However, proponents of the program respond that participating farmers are being required to implement some practices that are otherwise voluntary and that they are becoming a part of an incentive based program that provides substantial payments for aggressive conservation practices. This Tier I participation makes participation in Tiers II and III more likely. With changes being considered in Conference Committee it is expected this matter will be resolved in the direction of a higher threshold for receiving payment.

Problems with developing an international standard for conservation programs

Although one might expect WTO to be a part of advancing the Polluter Pays Principle, it is nearly impossible at this time to formulate an

international standard that operates fairly in the multitude of conditions that exist. These include the economic resources available for environmental programs, which vary dramatically from developed to developing countries. The standards for acceptable practices also vary from one region to another for reasons of both topography and the differing political acceptance and expectations of farming operations. Over time standards change. The benefits from practices that may justify payments to farmers in one area may not be recognized in some areas where there is an abundance of such benefits. The list could be continued. The point is that this is a hard enough issue to resolve within a country like the United States, let alone the world. The experience in the Europe Union is instructive. Despite having accepted the polluter-pays principle in the Maastricht Treaty, and its earlier recognition at the European commission level, the European Union in 1992 adopted environmental subsidies as a part of the Common Agricultural Policy. They do not reflect a rigorous application of the Polluter Pays Principle.

NOTES

7. Another Dutch program that will not be examined but which illustrates creative thinking is the Sustainable Agriculture Scorepoints. It provides farmers who rate high on a green service scorecard with tax relief and other benefits.

8. This author's personal observation of the launch of the Conservation Reserve Program (CRP) in the 1980's is that generous payments and enrollment incentives led to widespread participation in the program. However, now that CRP is well established, such incentives or bonuses are not as important.

9. See p.4

10. For a discussion of the auction system see Latz-Lohman (1997) and Vukina.

11. For a thoughtful analysis of Multifunctionality see Bohman, et al and see Grossman (Oct. 2001). An advocacy perspective can be found in papers presented at the Ullensvang, Norway Conference. See WTO (2-4 July 2000)

12. See Runge (1999) at p.63

13. See Boody.

14. see Royal Society for Prevention of Cruelty to Animals.

15. For an excellent analysis of this issue see Tobey et al.

THE WTO'S BIG BOXES AND ENVIRONMENTAL PROGRAMS

Untested Regulations

Government environmental and conservation programs providing for payments to farmers have not been controversial, nor have they been extensively analyzed for their fit with WTO. One reason is that they are popular. The larger community supports the promotion of stewardship of our natural resources. One recent Minnesota study reports that most residents support substantial financial incentives designed to encourage farmers to produce environmental and conservation benefits. When the conservation programs have come to the United States Congress, the principle difficulty has been to find budget resources and fight off competition from other programs for such finite money.

In the international context, the unhappiness with blatant trade distorting subsidies has made environmental and conservation programs look good by comparison. In the United States, total farm conservation program spending in the last few years is dwarfed by commodity and transition or AMTA program spending. Similarly, in the European Union, the Common Agriculture Policy provides far more for direct income and export subsidies to farmers.

As a result of this modest level of spending and the popularity of environment/conservation programs, it is tempting to dismiss the question of their compliance with WTO requirements as a matter of minor significance, or assume that if there is any problem with the spending level, it can fit within the Agreement on Agriculture's WTO *de minimis* categories or be left in a small corner of the Amber Box. Table 3 and 4 show the large *de minimis* amounts for the United States and the European Union. Total U.S. conservation spending, as shown on Table 3, was only \$297 million in 1998.

Another noteworthy situation is the fact that we have not had a single WTO or GATT action of complaint regarding subsidy payments. This is primarily a result of three factors:

- Efforts to live within the agreements.
- A reluctance by countries to draw one another into “court.”
- The so-called “Peace Clause” that was negotiated in the Uruguay Round.

All countries at least claim to have stayed within their Amber Box limits. The United States, with massive emergency and supplementary farm payments in the last three years, has pushed the Amber Box limits and only drawn inquiries and grumbling.

The Doha Round: A Spotlight on Environmental Programs

This charmed existence for environmental programs cannot be expected to survive. The Doha Round of talks provides a forum for debate. The Peace Clause is set to expire at the end of 2003. With more controversies arising in various trade sectors, complaints being filed, and sanctions being imposed, and with all the contentious debate over farm subsidies, a new more aggressive or litigious posture is apt to emerge in the years ahead. In this setting, conservation and environmental programs will not escape notice. The critics of the Conservation Security Program in the United States have questioned its compliance with the WTO. Foreign governments will be just as concerned. If Amber Box limits are reached, a controversy over agricultural programs is apt to be expanded to include any program that can be challenged.

CHANGES NEEDED IN THE WTO

Certainly the Uruguay Round gave status to environmental and conservation concerns. However, this does not mean that Paragraph 12, the Green Box/Annex 2 generally, or the larger Agreement on Agriculture do not need improvement. Several changes ought to be made. With the Doha Round of negotiations beginning, it is timely to consider improvements in the WTO.

Reigning in Subsidies

First, the most fundamental environmental problem with WTO is that the various boxes allow for massive subsidies. The member countries have insisted on permitting enormous trade distorting subsidies that encourage more intensive agricultural production than is environmentally sound. The size of the Amber Box, the Blue Box, and even the Decoupled Payment exemption in the Green Box allows the developed nations to pump tens of

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billions of dollars a year into the farm economy. In many cases these programs base payment upon yield. This encourages intensification.

Payments under these provisions compete with environmental and conservation programs for scarce budget authority and work at cross purposes with environmental and conservation objectives. If farmers can obtain subsidies with little or no cost, they will naturally oppose programs that condition payment on conservation and environmental measures. Government programs reward farmers for doing what they do best – grow more; farm more intensively. The availability of easy money in these programs handicaps the efforts to establish programs that place environmental expectations on farmers.

Recognizing Bonus Payments as Transaction Costs

Second, the cost standard in paragraph 12 of Annex 2 is an uncertainty and is too confining. Countries should be able to pay a reasonable incentive or motivating bonus like the Europeans are doing, and they should be able to provide incentives for favored practices that provide greater benefits. Although some such bonuses may be viewed as “transaction” costs and within the meaning of paragraph 12, an explicit recognition of the concept would be positive.

Allowing Benefit Payments

Third, although the “benefit” base for payments may be too vague a standard and may be troublesome to some, a bona-fide bidding situation can minimize trade distorting effects. The CRP in the United States clearly demonstrates this. Also, if the thrust of a program is to actually improve the environment and facilitate more extensive farming, it will favor farming in other countries. It is not trade distorting. Thus, any benefit program that clearly supports this extensive character and effect should be considered WTO compliant.

Dividing Programs Among Categories

Fourth, another helpful change in Annex 2 would be a clear recognition that countries can divide programs among categories. It should not require the delays and uncertainty of WTO adjudication. Transparency standards should be a part of any such allocation.

Multifunctionality: Ensuring WTO Compliance by Evaluating Final Results

Fifth, the multifunctionality principle is important for several countries and relates to this discussion. If clearly designed to induce more extensive

farming and farmers are being paid for a range of identifiable services in addition to producing agricultural products, it is doubtful multifunctionality will be trade distorting. A net effect test ought to be used.

Multifunctionality programs should also be reported to the WTO with an allocation of an appropriate part of the payment to the *de minimis* account or to any Blue, Amber or Green Box. For developed countries, some consideration should be given to requiring that the country establish parallel or offsetting programs for the benefit of producers in developing nations. This should be designed to overcome the skepticism that multifunctionality is just protectionism dressed up in pretty rhetoric and neutralize any trade-advantage to the country that uses such an approach. Similarly, any recognition of animal welfare considerations should avoid a type of protectionism that is not genuinely tied to the specific goals in the least trade distorting way.

Creating a Hierarchy of Criteria

Sixth, a hierarchy of criteria should exist for programs generally, especially for those that base payment on benefits rather than cost, those that are multifunctional, those that compromise the polluter pays principle, and those that may be trade distorting. These program characteristics create concern that subsidies may be trade distorting. In such cases observing standards in developing a proposal are helpful. Such standards have been the subject of several excellent discussions.¹⁶ The following is a synthesis of the salient points:

- Identify environmental damage or conservation needs and program objective.
- Target payment to specific goals to avoid over compensation.
- Make programs transparent in design and operation.
- Use the least trade distorting alternative in designing programs.
- Explain departures from Polluter Pay Principle by:
 - Prevailing practice standard in area
 - Property rights
- Set up a monitoring and evaluation program.
- Avoid discrimination against imported goods.

The WTO dispute resolution system should follow the foregoing criteria as framework for analysis. This would provide guidance to individual countries in developing their domestic policies and it would promote objective analysis. Given the change in farm policy that is occurring in the

developed world and the heightened awareness of the importance of environmental and conservation issues, WTO should contribute to progress. As a part of such a contribution, dispute resolution tribunals should clearly recognize the importance of so interpreting the current WTO provisions that environmental and conservation policies are advanced to the maximum extent.

The Environment Needs Neutral Regulation Outside of Regular WTO Mechanisms

Eighth and finally, questions must be asked about the setting in which conflicts between trade and environment/conservation are reconciled. The WTO provisions may clash with the programs of individual nations or programs that are an extension or the implementation of other international agreements. For example, preservation of biodiversity or prevention of global warming may justify programs that do not fit within the Annex 2 categories or payments to farmers that exceed WTO limits and would spill into the Red Box. Which agreement rules?

The WTO is at its core a pro-trade institution. Environmental issues may occasionally be critical, but as a subject area the environment is collateral. When other international forums with expertise on the environmental issue exist, the WTO should refer proceedings and decisions on the environmental initiatives or the reach of the Green Box to such forums. This is similar to the principle of administrative law known as “primary jurisdiction.” A neutral decision maker with appropriate expertise is needed.¹⁷ The task is to make sure WTO rules are sensitive to the environmental needs of the global community, that the programs to promote the environment fairly do so within an appropriate framework, and that disputes are properly resolved. A good analysis of the interrelationship between the ozone ban enforcement regime and WTO is discussed in the background paper sent to the WTO by the Secretariat of the Vienna Convention and the Montreal protocol.¹⁸ This provides a useful example.

NOTES

16. See summary of studies collected in OECD “Production Effects of Agri-Environmental Policy” at p.14

17. See article 23.

18. See Ervin (1999), Latacz – Lohmann (2000), and Runge (1999)

The adequacy of the Agreement on Agriculture and the WTO framework to meet environmental needs is uncertain. WTO is not an appropriately sensitized dispute resolution entity. The language of the Agreement on Agriculture, especially Paragraph 12 and Annex 2, is sparse and untested. On the positive side, the WTO has shined the bright light of rational analysis on distorting policies that do not withstand scrutiny and the Paragraph 12/Green Box environmental provision advances a more environmental friendly approach to agricultural policy. However, it is clear that the enormous existing subsidies have contributed to intensification in farming. Since these subsidy levels are recognized in WTO and since specific programs are allowed under WTO without effective limit, all of the downsides of current programs are protected by the inertia and by the difficulty of changing the WTO. In this sense WTO could become just one more stump in a landscape that needs to be cleared to encourage more environmentally friendly agriculture policies.

Given the difficulty of reaching consensus in the Doha Round over outstanding issues like multifunctionality and subsidy reform, WTO clarity is unlikely. Perhaps the most useful effort is to agree on core principles including:

- Agricultural Subsidies should be used to provide farmers with incentives to be responsible stewards of resources, to produce:
- Clean water
- Clean air
- Wildlife habitat
- Topsoil retention

Payments should not be made for standard farmland management practices. Rather, they should be made for extra efforts that produce publicly valued benefits. The Polluter Pays Principle should be a guide but not a strait jacket on policy.

An expansive cost reimbursement principle should be a safe harbor for subsidies; however, more creative, innovative programs that are transparent and not apt to be trade distorting should be allowed.

When payments are based on benefits, land rent, or other non-cost based criteria, developed countries ought to reduce other Green or Blue Box programs that are income subsidies and reduce the Amber Box. Delete this spaceThe dispute resolution process guarantees adequate participation of the environmental perspective.

Given the host of issues that will be on the Doha agenda, the multitude of voices, and the different perspectives even on environmental programs, it is apparent that progress is difficult. The challenge for the environmental/conservation perspective is more sobering when one recognizes that this study has only looked at subsidies. There is a whole range of other types of policy initiatives to advance environmental protection and conservation. Although being green may not be easy, there is also tremendous opportunity for progress. Doha will happen. It should be used to promote sound policies.

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DOMESTIC SUPPORT: THE BASIS FOR EXEMPTION FROM THE REDUCTION COMMITMENTS

1. Domestic support measures for which exemption from the reduction commitments is claimed shall meet the fundamental requirement that they have no, or at most minimal, trade-distorting effects or effects on production. Accordingly, all measures for which exemption is claimed shall conform to the following basic criteria:
 - (a) the support in question shall be provided through a publicly-funded government programme (including government revenue foregone) not involving transfers from consumers; and,
 - (b) the support in question shall not have the effect of providing price support to producers;

plus policy-specific criteria and conditions as set out below.

Government Service Programmes

2. General services

Policies in this category involve expenditures (or revenue foregone) in relation to programmes which provide services or benefits to agriculture or the rural community. They shall not involve direct payments to producers or processors. Such programmes, which include but are not restricted to the following list, shall meet the general criteria in paragraph 1 above and policy-specific conditions where set out below:

- (a) research, including general research, research in connection with environmental programmes, and research programmes relating to particular products;
- (b) pest and disease control, including general and product-specific pest and disease control measures, such as early-warning systems, quarantine and eradication;

- (c) training services, including both general and specialist training facilities;
- (d) extension and advisory services, including the provision of means to facilitate the transfer of information and the results of research to producers and consumers;
- (e) inspection services, including general inspection services and the inspection of particular products for health, safety, grading or standardization purposes;
- (f) marketing and promotion services, including market information, advice and promotion relating to particular products but excluding expenditure for unspecified purposes that could be used by sellers to reduce their selling price or confer a direct economic benefit to purchasers; and
- (g) infrastructural services, including: electricity reticulation, roads and other means of transport, market and port facilities, water supply facilities, dams and drainage schemes, and infrastructural works associated with environmental programmes. In all cases the expenditure shall be directed to the provision or construction of capital works only, and shall exclude the subsidized provision of on-farm facilities other than for the reticulation of generally available public utilities. It shall not include subsidies to inputs or operating costs, or preferential user charges.

3. Public stockholding for food security purposes¹⁹

Expenditures (or revenue foregone) in relation to the accumulation and holding of stocks of products which form an integral part of a food security programme identified in national legislation. This may include government aid to private storage of products as part of such a programme.

The volume and accumulation of such stocks shall correspond to pre-determined targets related solely to food security. The process of stock accumulation and disposal shall be financially transparent. Food purchases by the government shall be made at current market prices and sales from food security stocks shall be made at no less than the current domestic market price for the product and quality in question.

4. Domestic food aid²⁰

Expenditures (or revenue foregone) in relation to the provision of domestic food aid to sections of the population in need.

Eligibility to receive the food aid shall be subject to clearly-defined criteria related to nutritional objectives. Such aid shall be in the form of

direct provision of food to those concerned or the provision of means to allow eligible recipients to buy food either at market or at subsidized prices. Food purchases by the government shall be made at current market prices and the financing and administration of the aid shall be transparent.

5. Direct payments to producers

Support provided through direct payments (or revenue foregone, including payments in kind) to producers for which exemption from reduction commitments is claimed shall meet the basic criteria set out in paragraph 1 above, plus specific criteria applying to individual types of direct payment as set out in paragraphs 6 through 13 below. Where exemption from reduction is claimed for any existing or new type of direct payment other than those specified in paragraphs 6 through 13, it shall conform to criteria (b) through (e) in paragraph 6, in addition to the general criteria set out in paragraph 1.

6. Decoupled income support

- (a) Eligibility for such payments shall be determined by clearly-defined criteria such as income, status as a producer or landowner, factor use or production level in a defined and fixed base period.
- (b) The amount of such payments in any given year shall not be related to, or based on, the type or volume of production (including livestock units) undertaken by the producer in any year after the base period.
- (c) The amount of such payments in any given year shall not be related to, or based on, the prices, domestic or international, applying to any production undertaken in any year after the base period.
- (d) The amount of such payments in any given year shall not be related to, or based on, the factors of production employed in any year after the base period.
- (e) No production shall be required in order to receive such payments.

7. Government financial participation in income insurance and income safety-net programmes

- (a) Eligibility for such payments shall be determined by an income loss, taking into account only income derived from agriculture, which exceeds 30 per cent of average gross income or the equiv-

alent in net income terms (excluding any payments from the same or similar schemes) in the preceding three-year period or a three-year average based on the preceding five-year period, excluding the highest and the lowest entry. Any producer meeting this condition shall be eligible to receive the payments.

- (b) The amount of such payments shall compensate for less than 70 per cent of the producer's income loss in the year the producer becomes eligible to receive this assistance.
- (c) The amount of any such payments shall relate solely to income; it shall not relate to the type or volume of production (including livestock units) undertaken by the producer; or to the prices, domestic or international, applying to such production; or to the factors of production employed.
- (d) Where a producer receives in the same year payments under this paragraph and under paragraph 8 (relief from natural disasters), the total of such payments shall be less than 100 per cent of the producer's total loss.

8. Payments (made either directly or by way of government financial participation in crop insurance schemes) for relief from natural disasters

- (a) Eligibility for such payments shall arise only following a formal recognition by government authorities that a natural or like disaster (including disease outbreaks, pest infestations, nuclear accidents, and war on the territory of the Member concerned) has occurred or is occurring; and shall be determined by a production loss which exceeds 30 per cent of the average of production in the preceding three-year period or a three-year average based on the preceding five-year period, excluding the highest and the lowest entry.
- (b) Payments made following a disaster shall be applied only in respect of losses of income, livestock (including payments in connection with the veterinary treatment of animals), land or other production factors due to the natural disaster in question.
- (c) Payments shall compensate for not more than the total cost of replacing such losses and shall not require or specify the type or quantity of future production.
- (d) Payments made during a disaster shall not exceed the level required to prevent or alleviate further loss as defined in criterion (b) above.

- (e) Where a producer receives in the same year payments under this paragraph and under paragraph 7 (income insurance and income safety-net programmes), the total of such payments shall be less than 100 per cent of the producer's total loss.

9. Structural adjustment assistance provided through producer retirement programmes

- (a) Eligibility for such payments shall be determined by reference to clearly defined criteria in programmes designed to facilitate the retirement of persons engaged in marketable agricultural production, or their movement to non-agricultural activities.
- (b) Payments shall be conditional upon the total and permanent retirement of the recipients from marketable agricultural production.

10. Structural adjustment assistance provided through resource retirement programmes

- (a) Eligibility for such payments shall be determined by reference to clearly defined criteria in programmes designed to remove land or other resources, including livestock, from marketable agricultural production.
- (b) Payments shall be conditional upon the retirement of land from marketable agricultural production for a minimum of three years, and in the case of livestock on its slaughter or definitive permanent disposal.
- (c) Payments shall not require or specify any alternative use for such land or other resources which involves the production of marketable agricultural products.
- (d) Payments shall not be related to either the type or quantity of production or to the prices, domestic or international, applying to production undertaken using the land or other resources remaining in production.

11. Structural adjustment assistance provided through investment aids

- (a) Eligibility for such payments shall be determined by reference to clearly-defined criteria in government programmes designed to assist the financial or physical restructuring of a producer's opera-

tions in response to objectively demonstrated structural disadvantages. Eligibility for such programmes may also be based on a clearly-defined government programme for the reprivatization of agricultural land.

- (b) The amount of such payments in any given year shall not be related to, or based on, the type or volume of production (including livestock units) undertaken by the producer in any year after the base period other than as provided for under criterion (e) below.
- (c) The amount of such payments in any given year shall not be related to, or based on, the prices, domestic or international, applying to any production undertaken in any year after the base period.
- (d) The payments shall be given only for the period of time necessary for the realization of the investment in respect of which they are provided.
- (e) The payments shall not mandate or in any way designate the agricultural products to be produced by the recipients except to require them not to produce a particular product.
- (f) The payments shall be limited to the amount required to compensate for the structural disadvantage.

12. Payments under environmental programmes

- (a) Eligibility for such payments shall be determined as part of a clearly-defined government environmental or conservation programme and be dependent on the fulfilment of specific conditions under the government programme, including conditions related to production methods or inputs.
- (b) The amount of payment shall be limited to the extra costs or loss of income involved in complying with the government programme.

13. Payments under regional assistance programmes

- (a) Eligibility for such payments shall be limited to producers in disadvantaged regions. Each such region must be a clearly designated contiguous geographical area with a definable economic and administrative identity, considered as disadvantaged on the basis of neutral and objective criteria clearly spelt out in law or regulation and indicating that the region's difficulties arise out of more than temporary circumstances.

- (b) The amount of such payments in any given year shall not be related to, or based on, the type or volume of production (including livestock units) undertaken by the producer in any year after the base period other than to reduce that production.
- (c) The amount of such payments in any given year shall not be related to, or based on, the prices, domestic or international, applying to any production undertaken in any year after the base period.
- (d) Payments shall be available only to producers in eligible regions, but generally available to all producers within such regions.
- (e) Where related to production factors, payments shall be made at a degressive rate above a threshold level of the factor concerned.
- (f) The payments shall be limited to the extra costs or loss of income involved in undertaking agricultural production in the prescribed area.

NOTES

19. See Krist and Runge.

20. See WTO (June 19,2000)

21. For the purposes of paragraph 3 of this Annex, governmental stockholding programmes for food security purposes in developing countries whose operation is transparent and conducted in accordance with officially published objective criteria or guidelines shall be considered to be in conformity with the provisions of this paragraph, including programmes under which stocks of foodstuffs for food security purposes are acquired and released at administered prices, provided that the difference between the acquisition price and the external reference price is accounted for in the AMS.

5 & 6 For the purposes of paragraphs 3 and 4 of this Annex, the provision of foodstuffs at subsidized prices with the objective of meeting food requirements of urban and rural poor in developing countries on a regular basis at reasonable prices shall be considered to be in conformity with the provisions of this paragraph.

Appendix B

Tables

Table 1

UNITED STATES

Domestic Agriculture Support by WTO Categories (millions U.S)

	1995	1996	1997	1998
Amber Box				
Max. Permitted	23,083	22,287	21,491	20,695
Utilized	6,213	5,898	6,238	10,391
Blue Box (total)	7,030	0	0	0
Green Box (total)	46,033	51,825	51,246	49,824
General Services	5,811	6,550	6,797	7,146
Environmental/Resource Retirement	2,665	2,011	2,957	2,028
Decoupled Income Support	0	5,186	6,286	5,659
Domestic Food Aid/Nutrition	37,470	37,834	35,963	33,487
Structural/Regional Assistance	85	88	89	93
Natural Disaster Relief	102	156	157	1,411
<i>De minimis</i>	1,641	1,153	812	4,584
Export Subsidies	26	122	112	147

Source: WTO notifications

Table 2

EUROPEAN UNION

Domestic Agriculture Support by WTO Categories (millions ECU)

	1995/96	1996/97	1997/98	1998/99
Amber Box				
Max. Permitted	78,672	76,369	74,067	71,765
Utilized	47,526	51,009	50,194	46,683
Blue Box (total)	20,846	21,520	20,443	20,504
Green Box (total)	18,718	23,627	18,167	19,168
General Services	5,004	6,471	5,522	5,018
Environmental/Resource Retirement	3,809	5,752	4,019	5,393
Decoupled Income Support	244	221	211	129
Domestic Food Aid/Security	288	400	295	295
Structural/Regional Assistance	9,040	9,690	7,788	8,151
Disaster Relief	328	376	328	183
Income Insurance/Safety-net	0	717	4	0
<i>De minimis</i>	825	761	543	*
Export Subsidies	4,885	5,565	4,361	5,336

Source: WTO notifications

Table 3

OECD COUNTRIES

Total Support Estimate	383
Green Box	118
Agri-environmental	6

Source: OECD (2000) p.17

OECD Countries are: United States, European Union, Switzerland, Norway, Canada, Japan, Australia, and New Zealand

Appendix C

Glossary

Agreement on Agriculture. Part of the Uruguay Round agreement covering issues related to agriculture (e.g., market access, export subsidies, and internal support).

Amber Box. Internal support for agriculture that is considered to be trade distorting. It includes market price support, non-exempt direct payments to producers, and other internal policies to be disciplined. Market price support is measured by the gap between domestic and world prices multiplied by the quantity supported. Support provided through non-exempt direct payments is also measured using this price gap methodology. Other internal policies, such as input subsidies, storage payments and interest subsidies are measured by government budgetary outlays or the revenue forgone by governments.

AMS (Aggregate Measurement of Support). An index that measures the monetary value of government support to a sector. The AMS, as defined in the Agreement on Agriculture, includes both budgetary outlays as well as revenue transfers from consumers to producers as a result of policies that distort market prices. The AMS includes actual or calculated amounts of direct payments to producers (such as deficiency payments), input subsidies (on irrigation water, for example), the estimated value of revenue transferred from consumers to producers as a result of policies that distort market prices (market price supports), and interest subsidies on commodity loan programs. The AMS differs from the broader agricultural support measure, the Producer Subsidy Equivalent, by excluding estimated benefits (or costs) of certain non-commodity specific policies (e.g., research and environmental programs), and by using special WTO-defined measures of deficiency payments and market price supports. Furthermore, the final AMS for the WTO implementation period (1995–2000) is adjusted to exclude deficiency payments under WTO special provisions, even though they are included in the WTO base period.

Base Period. In the Uruguay Round 1986–88 was the base period for calculating domestic support and market access levels, and the base period for export subsidies was 1986–90.

Blue Box. Includes direct payments under production-limiting programs which are not subject to reduction commitments. To be exempt from reduction commitments, payments for crops must be based on fixed area and yields, or be made on less than 85 per cent of a base level of production. Payments for livestock must be made on a fixed number of head.

Bound Tariff. A maximum tariff level established by a country for a particular product. The “bound” tariff cannot be increased above this level without compensating other countries.

Cairns group. A group formed in 1986 in Cairns, Australia, that seeks the removal of trade barriers and substantial reductions in subsidies affecting agricultural trade. The group includes Argentina, Australia, Bolivia, Brazil, Canada, Chile, Colombia, Costa Rica, Fiji, Guatemala, Indonesia, Malaysia, New Zealand, Paraguay, the Philippines, Thailand, South Africa, and Uruguay. The Cairns Group was a strong coalition in the Uruguay Round of multilateral trade negotiations.

De minimis rule. The total AMS includes a specific commodity support only if it equals more than 5 percent of its value of production. The non-commodity specific support component of the AMS is included in the AMS total only if it exceeds 5 percent of the value of total agricultural output.

GATT (General Agreement on Tariffs and Trade). Originally negotiated in Geneva, Switzerland, in 1947, among 23 countries, including the United States, GATT is an agreement to increase international trade by reducing tariffs and other trade barriers. The agreement provides a code of conduct for international commerce and a framework for periodic multilateral negotiations on trade liberalization and expansion.

Green Box. Domestic support for agriculture that is considered not to distort production and trade. It must be government funded and not provide commodity price support to producers. It must also meet the policy-specific criteria contained in Annex 2 of the Agreement of Agriculture. Some examples are: research, inspection and grading, extension, marketing and promotion programs; domestic food aid; direct payments not linked to production; income insurance programs; disaster relief; and, environmental and conservation programs.

Multifunctionality. The complementary role played by agriculture in addition to producing food. It includes its contribution to sustainable

development, the protection of the environment, the sustained vitality of rural areas, poverty alleviation, and landscape aesthetics.

Non-tariff trade barriers. Regulations used by governments to restrict imports from, and exports to, other countries, including embargoes, import quotas, and technical barriers to trade.

OECD (Organization for Economic Cooperation and Development).

An organization founded in 1961 to promote economic growth, employment, a rising standard of living, and financial stability; to assist the economic expansion of member and nonmember developing countries; and to expand world trade. The member countries are Australia, Austria, Belgium, Canada, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States

Peace Clause. Informal name for Article 13 in the WTO Agreement on Agriculture which exempts certain policies from some GATT challenges 2003.

Subsidies. A direct or indirect benefit granted by a government for the production or distribution of a good or to supplement other services.

Sustainability. Development which meets the needs of the present without compromising the ability of future generations to meet their own needs.

Tariff-rate quota. Quantitative limit (quota) on imported goods, above which a higher tariff rate is applied. A lower tariff rate applies to any imports below the quota amount.

Tariffication. The process of converting non-tariff trade barriers to tariffs. This is done under the UR agreement in order to improve the transparency of existing agricultural trade barriers and facilitate their proposed reduction.

UR (Uruguay Round) agreement. The Uruguay Round of multilateral trade negotiations, conducted under the auspices of the GATT, is a trade agreement designed to open world markets. The Agreement on Agriculture is one of the 29 individual legal texts included in the Final Act under an umbrella agreement establishing the WTO. The negotiation began at Punta del Este, Uruguay, in September 1986 and concluded in Marrakesh, Morocco, in April 1994.

WTO (World Trade Organization). Established on January 1, 1995, as a result of the Uruguay Round, the WTO replaces GATT as the legal and institutional foundation of the multilateral trading system of member countries. It provides the principal contractual obligations determining how governments frame and implement domestic trade legislation and regulations. It is the platform on which trade relations among countries evolve through collective debate, negotiation, and adjudication.

Appendix D

Timeline

INTERNATIONAL TRADE AGREEMENTS PERTAINING TO AGRICULTURE AND THE ENVIRONMENT

1947 - 2002

1947	October	Adoption of the General Agreements on Tariffs and Trade at Geneva (GATT) with 23 signatory nations. The original charter allows exceptions from the rules on agricultural products and barriers that promote environmental protections.
1948	March	The Havana Charter of the International Trade Organization (ITO) is adopted at the United Nations Conference on Trade and Development (UNCTE).
1957	March	The Treaty of Rome establishes the European Economic Community and introduces original charter for the Common Agricultural Policy (CAP) for Europe.
1960	December	Central American Common Market (CACM) is created by the General Treaty on Central American Integration known as the Managua Treaty.
1972	June	Stockholm Conference becomes the first major UN international environmental summit.
1973	March	Convention on International Trade in Endangered Species of Flora and Fauna is ratified banning trade on a number of endangered species (CITES).
1973	July	Caribbean Community and Common Market (CARICOM) agreement signed.
1977	February	The ASEAN Preferential Trading Agreement (APTA) signed.
1973-79		Tokyo Round of GATT produces the Agreement on Technical Barriers to Trade (TBT). (http://www.wto.org/english/tratop_e/envir_e/hist1_e.htm)
1985	December	U.S. Farm Bill creates the Conservation Reserve Program (CRP) and creates key policies on preserving wetlands.
1986	February	The Single European Act (SEA) is signed in Luxembourg and The Hague which allowed for the creation of the internal market and a common European currency, the euro.

1986	August	Cairns group (Argentina, Australia, Bolivia, Brazil, Canada, Chile, Columbia, Costa Rica, Fiji, Guatemala, Indonesia, Malaysia, New Zealand, Paraguay, Philippines, South Africa, Thailand, Uruguay) is formed to bring agricultural issues to the forefront in the Uruguay Round negotiations
1986-94		Uruguay Round of GATT produces the Uruguay Round Agreement on Agriculture which brought agriculture more fully into the international trade regulation framework. (http://europa.eu.int/comm/agriculture/external/wto/newround/glossary.pdf)
1987	September	Montreal Protocol on Substances that Deplete the Ozone Layer
1989	March	Basel Convention on the Control of Transboundary Movement of Hazardous Wastes and their Disposal is adopted.
1990	September	Group of Three (G3) created with the Treaty on Free Trade between Mexico, Columbia, and Venezuela.
1991	March	Treaty of Ascuncion establishes MERCOSUR.
1991	September	GATT arbitration panel issues a decision against the US concerning a US ban on Mexican exports of tuna to the American market.
1992	June	Rio Declaration on Environment and Development adopted.
1992	February	Treaty on European Union, also known as the Maastricht Treaty, is signed by the EU member states which reaffirms the Polluter Pays Principle.
1993	December	North American Free Trade Agreement (NAFTA) is ratified by the US.
1994	April	Marrakesh Declaration calls for the creation of the World Trade Organization (WTO). Additionally, the TRIPS Agreement on intellectual property rights addresses patents on genes.
1994	November	APEC meets in Bogor, Indonsia reaching an agreement on freer trade.
1995	January	WTO established
1996	March	Andean Community born out of the Codification of the Andean Subregional Integration Agreement (Cartagena Agreement).

1996	April	U.S. Farm Bill (Freedom to Farm Bill) signed including a reauthorization of the CRP and wetlands preservation programs and the addition of the Environmental Quality Incentives Program (EQUIP).
1997	December	Kyoto Protocol introduced at the third Conference of the Parties to the United Nations Framework Convention on Climate Change
1998	April	Negotiations launched for the Free Trade Agreement of the Americas (FTAA) at the second Summit of the Americas at Santiago, Chile.
1998	February	The Appellate Body of the WTO rules against the EU appeal on keeping a ban on US hormone treated beef.
1998	January	The Appellate Body in the Shrimp-Turtle case decided in favor of US ban on shrimp from countries that used fishing methods that endangered turtles.
1998	November	The Appellate Body rules against Australian ban on Atlantic salmon and upholds the decision of the WTO Panel.
1999	December	Seattle Ministerial Conference of the WTO
2001	November	Doha Ministerial Conference sets deadlines for negotiations on improved market access and reduced subsidies at January 2005.
2002	May	U.S. Farm Bill including the Conservation Security Program (CSP) is signed.
2002	August	Johannesburg Summit on Sustainable Development to be opened.

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