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Bringing Agriculture into the GATT:

REINSTRUMENTATION OF AGRICULTURAL POLICIES

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Reinstrumentation of Agricultural Policies

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On

"Reinstrumentation of Agricultural Policies"

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Preface

The International Agricultural Trade Research Consortium (IATRC) is a group of more than 100 economists interested in agricultural trade, drawn from the academic community, government, and private institutions in North America and seven other countries. Founded in 1980, the Consortium has the following objectives:

(1) to facilitate and stimulate improvement in the quality and relevance of international agricultural trade research and policy analysis;
(2) to facilitate collaborative research among its members;
(3) to facilitate interaction among researchers and analysts in different countries engaged in trade research; and
(4) to improve the general understanding of international trade and trade policy issues among the public at large.

To further these objectives, the Consortium has analyzed a number of trade issues and problems associated with the current round of international negotiations under the General Agreement on Tariffs and Trade. The first efforts were presented at the Symposium on "Bringing Agriculture into the GATT" held in August 1988 and published as a series of Commissioned Papers:

(1) Assessing the Benefits of Trade Liberalization
(2) Designing Acceptable Agricultural Policies
(3) Negotiating a Framework for Action.

The IATRC, with members of the International Policy Council on Agriculture and Trade (IPC), subsequently identified additional issues. The IPC, founded in 1987, is comprised of 31 agricultural leaders from twenty countries with the goal of developing economically and politically realistic policy options to problems facing global agriculture.

These analyses have been published as a continuation of the IATRC Commissioned Paper series:

(4) Tariffication and Rebalancing
(5) Potential Use of an Aggregate Measure of Support
(6) Reinstrumentation of Agricultural Policies.
(7) The Comprehensive Proposals for Negotiations in Agriculture

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Reinstrumentation of Agricultural Policies

Introduction

The negotiating parties agree that only those policies that distort agricultural trade and thus affect a nation's trading partners are to be negotiated during the Uruguay Round. Of concern, therefore, are not the domestic policy objectives of governments, but the trade effects of the policy instruments they employ in pursuit of those objectives. Eliminating, or even substantially reducing, the price and income stabilization and support effects of domestic subsidy programs may not be politically feasible. In addition, governments' agricultural policies also promote politically-sensitive societal goals, ranging from environmental protection to food security. The instruments used with these policies often transfer income, affect farmers' and consumers' decisions, and therefore distort trade to some degree. But, whatever the goals of national policies, there is agreement that these diverse domestic policy objectives should be met by programs that minimize the level of trade distortion: agricultural policies should be *reinstrumented* to minimize their trade distorting effects.

The interpretation of "reinstrumentation" varies across negotiating proposals. The United States has proposed the conversion of non-tariff import barriers to tariffs and all within-frontier income and price support programs to "decoupled" direct payments. Reinstrumentation here is clear; only tariffs and criteria for decoupled programs need be negotiated. An agreement to reinstrument agricultural policies must, of course, be accompanied by appropriate changes in GATT rules. Since quantitative import restrictions (quotas) would be converted to an equivalent tariff under the U.S. proposal, the GATT rule that allows quantitative import restrictions (Article XI:2(c)) would be eliminated. Reinstrumentation here would mean that primary products also would be subjected to a prohibition on export subsidies, necessitating a change in Article XVI.

Other nations view reinstrumentation as the determination of internationally-acceptable characteristics of policies that meet some minimum standard of trade distortion. Reinstrumentation in this case might involve the identification of an exhaustive list of "types" of domestic programs, and classification of existing programs by "type." International agreement could then be sought on the categorization of policy types according to whether they are to be permitted, prohibited or disciplined. For some program types that span more than one of these categories, criteria could be developed to determine which programs fall into which category. Under this notion of reinstrumentation, GATT rules that allow differential treatment for primary commodities in trade - quantitative restrictions on imports and subsidies to exports - may be retained, but there would be a significant strengthening of the disciplines governing exceptions claimed under those rules, and of the GATT dispute settlement mechanisms.

The use of an aggregate measure of support (AMS), proposed by many countries as a negotiating tool for the Uruguay Round, is also compatible with the reinstrumentation of agricultural policies. Countries could meet their AMS-based obligations both by changing the parameters of existing programs and by reinstrumenting their agricultural policies: replacing trade distorting measures with policy instruments that were internationally agreed to be trade neutral, and hence excluded from the AMS.

This report addresses many, but not all, issues related to reinstrumentation. Nor does it advocate a particular country's position. Rather, the report develops criteria for a selected set of commonly-employed agricultural program types. If programs are redesigned to meet these criteria, trade distortions would be reduced to within a *de minimis* standard. Policies not meeting the criteria would be included in a country's AMS and subject to overall AMS reductions and/or would be subject to policy specific commitments to reduce trade distortions. The criteria could be incorporated in the GATT legal framework through any or all the following: an exchange of diplomatic notes, interpretive notes to existing GATT articles, amendment of GATT articles,

inclusion of an AMS-based agreement in a nation's schedule of concessions, or in a separate and detailed code on agricultural support.

Scope of the Report

This report develops a categorization of agricultural programs and addresses those negotiating issues involving "internal support" and international food aid. An illustrative list of programs is as follows:

Presumptively trade distorting policies that are included in the AMS and/or subject to policy specific commitments to reduce trade distortions include:

- open-ended market price supports maintained with border measures; and
- open-ended direct payments and input subsidies.

Potentially trade distorting policies that may be included in the AMS and/or subject to policy specific commitments to reduce trade distortions include:

- market price supports with supply restrictions;
- income support (direct) payments and input subsidies with payment limitations;
- safety-nets: producer price/income stabilization and crop insurance;
- subsidies for infrastructure and rural development;
- domestic subsidies for conservation or environmental practices;
- orderly marketing arrangements;
- stock-holding programs; and
- international food aid.

Presumptively non-trade distorting policies that are internationally acceptable without modification include a host of such public goods-type programs as:

- research and extension;
- vocational education;
- inspection, grading and other marketing services; and
- adjustment assistance.

This list is illustrative and not exhaustive; the exact list of programs and their classification must be determined in the negotiations.

The report focuses on policies in the *presumptively trade distorting* and *potentially trade distorting* categories. Some of these policies can be redesigned (or reinstrumented) to reduce trade distortions to a *de minimis* standard. The term *de minimis* as used in this report defines a minimal, and thus an acceptable, level of trade distortion in the view of task force members, particularly when compared against current trade distortions. This definition of the term *"de minimis"* should not be confused with other meanings of the term, particularly as used in the national application of trade remedy laws and in the GATT's Subsidies Code. Trade distortions would not be completely eliminated even if only those policies meeting the *de minimis* criteria developed in this report were permitted under the GATT.

Criteria are not developed for *presumptively non-trade distorting policies*. But, even these policies might be considered potentially trade distorting by some countries. Nations have placed countervailing duties on products developed through government-subsidized research and development programs. Criteria which ensure that these policies are internationally acceptable

may be required eventually, but this is not seen as a high priority for the agricultural negotiations in the Uruguay Round.

Two types of policies are included in the *presumptively trade distorting* category: open-ended market price supports and open-ended direct payments. Market price supports require border measures that drive a wedge between (and likely sever the link with) domestic producer and consumer prices and international prices. In contrast, direct payments and input subsidies do not cause consumer prices to diverge from international prices. The trade distortions arising from market price support programs, which distort both production and consumption, are unambiguously larger than those of direct payments and input subsidies that affect only domestic production. However, both policies provide producers with an open-ended incentive to expand production and should be included in the AMS and/or be subject to policy specific commitments to reduce support, and thus reduce trade distortions.

Domestic administered price systems are a typical component of internal support measures, but domestic prices cannot be raised above world prices without the use of border measures. ***Internal administered prices and border measures are two sides of the same coin – import controls and export subsidies underpin internal programs. As a result, negotiated changes in import and export practices will require changes in domestic administered prices, and vice versa.*** The issue is not one of reinstrumentation, but of developing an integrated approach to eliminating the distortions caused by administered price systems and their accompanying border measures.

Most of the policies in the *potentially trade distorting* category are internal support measures involving domestic subsidies. Exceptions are "international food aid" and "market price supports with supply restrictions." Countries have proposed that *bona fide* food aid be permitted under the GATT. Criteria are therefore needed to determine when such aid is *bona fide*. Market price supports with supply controls require border measures to maintain a wedge between domestic and world prices. They also insulate domestic prices from changes in world prices. In principle, therefore, they are more trade distorting than other policies in the *potentially trade distorting* category. However, the trade distortions caused by administered price programs can be substantially reduced through "effective" supply management. The following questions must be addressed: what criteria are necessary to ensure that these programs are indeed minimally trade distorting while recognizing that this also may require the retention of import restrictions and export subsidies; what are the "like products" to which border controls may be applied; and what negotiating approach should be used to reduce or eliminate the trade distortions caused by these programs?

Trade Distortions: General Principles

Governments transfer income to farmers to achieve several policy goals. Increasing and stabilizing farm incomes are the principal objectives, but such "nonagricultural" objectives as providing rural amenities, preserving the environment, enhancing food security and promoting regional economic development are also pursued with agricultural policy instruments.

It is the extent to which these programs influence production and consumption decisions, and hence trade, that is the focus of the Uruguay Round. It has been agreed that it is the trade distortions resulting from a particular policy that are important, not the ultimate objective of the policy or the size of the income transfer. So, it is useful to have a conceptual framework for determining the potential trade distortions arising from particular policy types.

Table 1 identifies the characteristics of six different types of agricultural programs and ranks the level of trade distortion associated with each. Several characteristics help to determine

The Agricultural Negotiations and the Subsidies Code

It may be impossible to reach an agreement in the agricultural negotiations to outlaw the use of any domestic subsidy or frontier measure. Hence the traffic light system being considered in the subsidies negotiating group may not be fully applicable to agriculture since there would be no "red light" category, i.e. measures that are forbidden, and automatically countervailable without proof of injury. "Red" agricultural policy instruments would be captured by AMS and/or policy-specific commitments to reduce support. Presumptively non-trade distorting measures would be treated as "green light" (permitted and non-countervailable).

The major goal of this report is to develop criteria whereby potentially trade distorting policies can be made internationally acceptable. In Subsidy Code terms, these policies could be "amber light" (permitted but countervailable), but with *de minimis* trade effects if they meet the criteria identified in this report. Countries would be encouraged to "reinstrument" (i.e. add trade-friendly features to "reds" and "ambers", and elevate the importance of objectives pursued with "green" instruments in national agricultural policies) by the obligation to reduce trade distortions either by reducing their AMS or by policy-specific commitments to reduce support, and by the desire to avoid countervailing duties in bilateral trade.

the potential trade distortions resulting from different types of programs. For example, eligibility characteristics determine who qualifies for a program. Is the program only available to the agricultural sector and must an individual/resource continue to engage/be used in agriculture to qualify? Other characteristics determine the extent to which program benefits vary with the level of agricultural output or input use. *If program benefits vary directly with output or input use, they are highly distorting*. This section focuses on eligibility characteristics and the general link between production and program benefits. The remaining sections discuss several mechanisms for breaking the link between program benefits, production and trade. This is the essence of reinstrumenting domestic agricultural programs.

The least distorting type of program would be unconditionally available across the entire economy (Level 1). Unconditionality implies that benefits are unrelated to any agricultural activity - past or present. An example might be a macroeconomic transfer such as a negative income tax or tax credit. To be sure, even macroeconomic policies affect agricultural production and trade through their impact on the relative price of tradeables to non-tradeables. But, macroeconomic objectives are seldom the focus of agricultural policies and will not be negotiated in the Uruguay Round.

Subsidies for public infrastructure development and for the promotion of economic development also might be generally available. Even though such subsidies may be targeted specifically to the farm/rural sector, their benefits are available to both farmers and non-farmers alike. At issue, then, is when are the benefits of subsidies "generally available?"

Of more relevance to agricultural policy goals are payments that are available only to the agricultural sector (Levels 2 and above). Such payments may be made to an individual who is(was) actively engaged in farming or to a resource that is(was) used in the production of agricultural commodities. The least-distorting agricultural payments are those that do not require continued agricultural activity (Level 2). If paid to an individual, that individual can leave

agriculture and still receive payment. If tied to resource use, the resource can be used outside agriculture and still receive payment.

Very few agricultural policy objectives could be achieved when payments do not require agricultural activity (Level 2). Since an individual can leave farming and still receive payment, others may consider the payments inequitable. Lump-sum compensation for the removal of current agricultural support programs might be classified as Level 2 payments. *If made on a lump sum basis, it is irrelevant whether an individual must continue in farming to receive the payment.* However, lump-sum compensation schemes might be prohibitively expensive if they were required to reflect the capitalized value of the future benefit stream of existing support programs.

Table 1. Characteristics of Agricultural Programs and the Level of Trade Distortion.

Trade Distortion	Descriptive Level	Characteristics of Programs
Least	Level 1	Available to Anyone No Agricultural Activity Required
Low	Level 2	Available Only to Agricultural Producers No Agricultural Activity Required Payments Unrelated to Output/Input Use
	Level 3	Available Only to Agricultural Producers Agricultural Activity Required Payments Unrelated to Level of Output/Input Use
	Level 4	Available Only to Agricultural Producers Agricultural Activity Required Payments Related to Level of Output/Input Use but With Limits on the Level of Output/Input Receiving Support
High	Level 5	Open-ended Direct Payments Related to the Level of Output/Input Use
Most	Level 6	Administered Prices Applicable to Total Output - Maintained With Border Controls and Involving a Consumption Distortion.

Although there may be few examples of agricultural policy objectives that can be achieved with Level 2 payments, there are certain "non-agricultural" objectives that could be achieved. In these cases, the eligibility requirements would reflect those non-agricultural objectives and not require agricultural production. Examples are environmental preservation, conservation and border security. Preventing urban encroachment on agricultural land also could be achieved with Level 2 payments. In this case, per-hectare subsidies could be used to raise the value of agricultural lands relative to their value in non-agricultural uses. The eligibility requirements for the subsidies would limit land use but not require agricultural production.[2]

Production and trade distortions increase if agricultural programs require a farmer or a resource to continue to engage in agriculture to receive payment (Level 3). Although subtle, the distinction between Level 2 and Level 3 is important. Eligibility conditions for Level 3 programs allow agricultural production and are necessary for governments to meet most agricultural policy objectives.

The most important characteristic of these programs is the degree to which the benefits are directly related to the level of output or input use. Both Level 2 and Level 3 programs provide benefits that are independent of production or input use. This characteristic eliminates the incentive to expand output to increase one's benefits from the program. Level 4 and Level 5 programs, on the other hand, link benefits to the level of output or input use. Not only must farmers produce to receive the payments, which distorts trade, but they also have the incentive to expand output to increase payments, which increases trade distortions. But, trade distortions can be contained by placing a limit on the overall level of output/input use eligible for support (Level 4). There is no incentive to expand output or input use beyond the eligibility levels, and depending on the form and level of constraints imposed, trade distortions may be substantially reduced. Programs that do not constrain the incentive to expand production are Level 5.

Level 6 programs involve administered prices that are above free market levels (market price supports). Such programs encourage production and restrict consumption, and require border protection for their success. Market price supports distort trade more than do direct payments while achieving the same agricultural policy objectives. If market price supports are reinstrumented to direct payments, market prices in each country would move to world levels. Production distortions would remain, but consumption distortions would be eliminated.

Trade distortions for all direct payment programs above Level 1 can be reduced by targeting the benefits to specific groups. For example, the incomes of small, resource poor or hillside farmers could be supplemented with targeted direct payments. Similarly, targeted direct payments could be used to meet specific environmental or conservation goals. Targeting would significantly reduce the domestic resource and output distortions resulting from traditional farm programs.

Farm Income Support and Stabilization

While governments provide financial support for many agricultural activities, the most controversial in trade policy terms are those justified on the grounds of stabilizing and supporting farm incomes. Therefore, criteria are developed in this section for reducing or eliminating the trade distortions from three types of policies that are often used by governments to achieve these objectives: (a) direct and indirect support payments, (b) administered prices with supply controls and (c) farm income safety-nets. Nothing further is said about market price supports without supply controls. The most desirable method for reinstrumenting this policy type (Level 6) is to eliminate the border controls that underpin administered prices and transform the form of support to direct payments. A less desirable alternative is the institution of supply controls that would be accompanied by a minimum access commitment.

Reinstrumenting Direct and Indirect Payment Programs

All payments targeted solely to the agricultural sector will tend to maintain and attract resources into agriculture. This is the case even for Level 2 payments, for which eligibility is independent of whether an individual or resource remains in agriculture. The reason is that payments increase liquidity in the agricultural sector, and some inefficient farmers who would suffer continued losses under a more market-oriented agriculture might choose to use the payments to cover their losses and remain in agriculture. Also, no matter what the eligibility conditions, farmers are likely to reorganize assets or production practices to meet these conditions to increase their payments.

Nonetheless, the trade distortions resulting from programs with Level 2-3 characteristics are likely to fall within a *de minimis* standard.[3] Common to these programs is the characteristic that the link between program benefits and the level of output or input use is broken. Therefore,

Reinstrumentation of Programs with Higher Orders of Trade Distortion

Requiring governments to meet Level 3 criteria would substantially reduce trade distortions arising from direct payments but may not be politically acceptable as an alternative to existing mechanisms for supporting farmers. Also, there is an inverse relation between trade distortions and the ability of governments to achieve some policy objectives; the very nature of some policy objectives is such that they cannot be achieved in a non-distorting manner. Consequently, it may be necessary to allow programs with trade distortions greater than Level 3 in order to achieve an agreement by all GATT contracting parties.

The supply response from Level 4 and 5 programs could be limited by agreeing to constraints on the amount by which domestic producer prices could rise above, or input prices fall below, world price levels. In essence, this would put a cap on the divergence between domestic producer prices and world price levels, and this price gap could then be negotiated downward in much the same fashion as tariffs.

An alternative might be to negotiate down the size of the overall income transfers (expenditures) that result under Level 4 and Level 5 programs utilizing an aggregate measure of support. This would allow governments to change *either* producer prices or the quantity eligible for support payments, or some combination of the two as long as total expenditures declined. If limits on farm income transfers through direct payments are negotiated, it would be up to individual governments to develop strict eligibility criteria to prevent transfers from expanding as producers reorganize to meet the criteria.

one need only define alternatives for breaking this link. This is often called "decoupling" the payments from farmers' decision to produce. Over time, the term "decoupling" has taken on several different connotations. In this report, the term refers to the impact of a government payment on production. *If neither the implementation nor removal of a payment has any effect on production, the payment is fully decoupled.* This a strict criterion since, as mentioned earlier, all payments that are targeted to agriculture likely affect output to some degree.

The production and trade distortions caused by direct/indirect payment programs depend on the size of the payments, on those program regulations that determine how payments enter producers' marginal revenue and marginal cost calculations, and on the supply response of producers. But, our sole concern here is how payments enter marginal revenue and marginal cost calculations. If the payments do not affect these calculations, they will cause few if any production distortions and the link between the payments and farmers' production decisions will be substantially broken (or substantially decoupled).

There are two alternatives for breaking the link between production and payments. *Under the first alternative, payments do not increase or decrease with the production of specific commodities or use of particular inputs. Under the second, payments are allowed to vary with output or input use up to a fixed level.* These alternatives transform Level 4 and Level 5 programs into Level 3 programs. Level 2 would be achieved if production is not required to receive payments.

Relationship of Payments to Market Prices

A criteria that is often mentioned as essential for a non-distorting program is that payments be independent of market price. However, *independence from price is not a critical factor that determines whether or not a program distorts production and trade.* If producers do not vary output in response to the payment, the size of the payment does not matter. Thus, it also does not matter whether the payment depends on market price. On the other hand, a payment that is directly linked to agricultural production would distort production and trade even if it were independent of price. When a payment is linked to the level of output or input use, it is the size of the payment that is important, not how it is determined.

The major reason for making this distinction is that requiring payments to be independent of prices would rule out some programs that may be deemed desirable by GATT contracting parties. Payments under many types of safety-net programs, for example, depend on market prices. When providing a safety net to farmers is the policy objective, an alternative to decoupling the payments is to require programs to meet internationally accepted criteria for safety-net programs. These criteria and various types of safety-net programs are discussed in the next section. Essentially, the criteria ensure that payment rates are market-oriented and that production and resource levels approach no-program levels. Safety net programs would not qualify as decoupled programs, however, since payments are output-based and do affect farmers' expected net returns and their level of risk. The criteria for safety nets ensure that the resulting trade distortions fall within a *de minimis* standard.

Alternative 1: Payments are independent of the level of production of specific commodities or use of particular inputs.

Under this alternative, payments could be based on historical production or input use, previous government transfers, or an income-needs test. The exact method is largely irrelevant since clearly current production cannot affect either current or future payments. Since payments are independent of the production of any specific commodity or use of a particular input, the payments do not enter marginal revenue and marginal cost calculations. The payment is simply an income transfer.

The second alternative retains many characteristics of traditional agricultural commodity programs and may be more acceptable to policy makers:

Alternative 2: Limit the output or input levels that are eligible for payment to below no-program levels and bind those levels in GATT.[4] Production of specific commodities or use of a specific input (land, for example) up to eligibility levels could be required.

This alternative could entail the use of *Production Entitlement Guarantees* (PEGs) a concept introduced in an earlier IATRC report.[5]

Under this second alternative, production or use of an input can be required, but fixing the output or input base eligible for support eliminates the non-market incentive to expand output/input use beyond the eligibility levels.[6] If production is required, however, producers

will continue to produce at least at the eligible base to receive payments. Thus, production is likely to be distorted. The extent of this distortion depends on where the eligibility limits are placed. If the production or input use eligible for support is above that which would be produced or used with no programs, the distortion will equal the difference between actual production and no-program production. If the production eligible for support is at or below the no-program level, the payments no longer affect the producers' marginal production decisions. Though farmers must produce to receive payments, the payments do not enter marginal revenue and marginal cost calculations and so production is undistorted.

To completely eliminate trade distortions using this alternative, trade negotiators would have to agree on no-program output/input levels for each country and commodity. An alternative is to negotiate a significant across-the-board reduction in the output/input levels eligible for support. Although this may appear to involve negotiation over production levels, only the production base entitled to government payments is, in fact, being negotiated. If the reduction in production/input eligibility levels is large enough, production and trade will approach free trade levels and most of the distortions to world trade will be eliminated. There is no constraint on the production of efficient farmers who can profitably produce at world prices.

Reinstrumenting Market Price Supports With Supply Controls

Market price supports with supply controls (management) differ from open-ended direct payments in that: a) they distort both production and consumption, b) the import controls necessary to underpin domestic supply management are currently GATT-legal, and c) they can involve large income transfers and yet not distort trade. In other words, supply controls reduce the trade distorting effects of market price supports involving border measures.

Yet, for several reasons, the task force feels that supply controls, and the border measures necessary for their survival, do not provide a long term solution to the problems plaguing world agricultural markets. Chief among these reasons is that supply controls require the use of undesirable trade instruments (import quotas and export subsidies), which if employed on a wide scale would lead to a world of managed trade. Managed trade is the antithesis of the liberal trading environment espoused by the GATT where large and small countries compete fairly for available markets based on comparative advantage. It should be viewed as an aberrant policy and should entail significant concessions from nations choosing this policy type. This is particularly the case when large agricultural exporting nations wish to retain market price supports and export subsidies by obtaining GATT-legal import quotas in return for domestic supply control programs.

In addition, supply management is a cost-ineffective method of transferring income to farmers from a national perspective. Such income transfers are eventually incorporated into elevated cost structures as production quotas (which become valuable assets) are transferred between original and subsequent holders. Furthermore, the need to defend quota investments and the loss of competitiveness due to raised cost structures builds a constituency for the *status quo* and creates policy inflexibility.

Nonetheless, it can be argued that it is only trade distortions that matter in GATT and that domestic policy inefficiencies should not be its concern. Furthermore, a supply management scheme can be designed by an importing nation to give exporters the same trade volume as would be achieved in a particular period in the absence of controls. But comparative advantage is a dynamic concept and it is impossible to devise rules that will guarantee an exporter its "fair share" of the protected market in the future. Finally, import quotas are often allocated in ways that discriminate against some exporters.

For the above reasons, the criteria required of importing nations who use import quotas with supply control would be tightly circumscribed. They could include the following:

- importing nations would guarantee exporters access to their market for all like products equal to {X} percent of their domestic consumption requirements or the average of the previous three year's trade volume, whichever was greater;[7]
- a narrow definition of "like products" is employed;
- import quotas would grow in proportion to domestic consumption; and
- importing nations would be prohibited from exporting any primary or like product subject to import controls.

If GATT members agreed that the import quotas (and hence the domestic production levels) proposed by a country were non-trade distorting, then the support provided to this commodity would be excluded from the aggregate measure of support and would not require any further policy specific commitments, i.e., the program would be internationally acceptable. Failing this:

- the support provided to commodities under supply management (including all like products) would be measured by the per unit aggregate measure of support times the total quantity produced, i.e., the aggregate value of support.[8]

By using the aggregate value of support as the AMS, nations would receive credit for reductions in the quantity of product produced under supply management as long as price increases did not offset the quantity adjustment. The aggregate value of support is a poor proxy for the trade distorting effects of domestic supply management programs, but would penalize those countries pursuing this policy option. The requirements for minimum access commitments, anti-dumping rules and the inclusion of protection for all like products in an AMS should serve to discourage the expansion of supply management programs.

Exporting countries also may want "negotiating credit" for implementing supply controls and may prefer to meet their obligations to reduce support by reducing output rather than by lowering administered prices and curtailing export subsidies. Because of the difficulty of developing non-trade distorting criteria for exporters (who may, in fact, be importers at world market prices), all nations who wish to have their border control/supply control schemes approved by the GATT, and removed from their AMS, would have to meet the same criteria as importers. Failing this, credit for supply controls in exporting countries would be measured by reductions in the total value of the AMS as production and/or support was reduced.

Reinstrumenting Farm Safety-Net Programs

Economic and financial instability are endemic features of agricultures' product and factor markets and its farm businesses. Such instability may be due to fluctuations in output levels, product prices or input costs. Agricultural stabilization programs seek to reduce the amplitude of fluctuations of key target variables affecting the farmer's financial condition. The target variables might be prices, revenues, margins or net farm incomes. Safety-net programs seek only to truncate the left-hand side of the experienced/expected distribution of the target variable.

The justifications for agricultural stabilization programs are varied. The political imperative of responding to the economic plight of an influential constituency no doubt plays a role. So too do notions of distributive justice that represent such transfers as social assistance

Note on Revenue and Income Insurance

Programs in many developed countries aim to smooth out fluctuation in agricultural incomes arising from both market and production risks. Typically, price stabilization programs are directed at market risk and crop insurance at production risk. The problems with this dual approach are that no account is taken of price and yield interactions within and between commodities, little is know about the "additivity" of commodity-centered stabilization schemes, payments are not always targeted on farm businesses in financial need, and production decisions may be affected by varying availability and different levels of assistance across commodities. Consequently, even from a national perspective, stabilization programs often fail to meet their goals of providing assistance to individual farm business units as they cope with short-term market and production variations while adjusting to long-term trends. And from an international perspective, there is suspicion that some "stabilization" programs distort trade by providing farmers with economic hammocks rather than safety nets. For these reasons there is a good deal of interest in devising safety-net programs that are nationally more cost effective and internationally more acceptable.

Two options suggest themselves. First, it should be possible to link yield and price programs by replacing crop insurance and commodity price stabilization schemes with programs that stabilize gross revenue at the level of the individual farm. Governments and producers would pay premiums into a farm gross revenue insurance fund, with payments being made when individual farmer's market revenue fell below target levels. Gross revenue insurance could be offered for individual products, but stabilization goals and production and trade neutrality would be better assured if the combined revenue from a basket of products was jointly insured. A second, and an intuitively more appealing approach, would be to stabilize net income at the level of the individual farm. Under such a scheme, producers and governments would contribute to individual net income stabilization accounts, with withdrawals when the gross margin for the farm as a whole fell below its average level in a previous period.

comparable to that available to other distressed groups in society. More compelling is the argument that public stabilization programs are justified by market failure due to incomplete risk markets in agriculture. The socialization of uninsurable risk is held to improve allocation efficiency by, for instance, encouraging specialization, offsetting internal and external capital rationing, preventing collective "over-shooting" in reaction to sporadic market events, and averting the loss of otherwise efficient businesses in financial crises. These arguments are not entirely persuasive. Nonetheless, governments may not agree to withdraw entirely from business of reducing instability in agriculture. The policy task, therefore, is to identify criteria that reduce the production and trade distortions caused by such programs to within a *de minimis* standard.

Two types of distortion can arise from safety-net programs. The first occurs when the programs support their target variables at a higher level than would occur under free trade. In fact, the goal of enhancing stability in agriculture is invariably cited as a rationale for farm programs that persistently support incomes or prices above competitive levels. Such programs often masquerade under a title that contains the word "stabilization" even though the support element of the programs is their primary objective. Criteria are therefore needed to differentiate between "stabilization" and "support."

The second type of distortion arises because safety-net programs, by design, reduce farmers' risks. Only if farmers bear the full cost of such programs would this distortion be substantially eliminated. If one accepts that private insurers may be unable to pool the risk from large agricultural losses and that it is in the public interest for governments to provide such insurance, international agreement is needed on criteria for the amount of risk reduction that is to be allowed and the extent to which governments are permitted to subsidize risk premiums.

There are several types of safety-net programs in use in the developed countries. They differ in the target variable being stabilized. Net-income and margin programs cover losses due to lower gross revenues and/or higher costs. A revenue safety-net program, on the other hand, insures only against losses in gross revenues. Other types of safety-net programs provide protection against changes in a single variable. Price underwriting insures only against declines in gross revenues due to lower prices. Crop insurance and disaster assistance insure against declines in production. For crop insurance, coverage is provided annually for natural variations in output. Disaster relief is provided on an *ad hoc* basis for unpredictable natural events such as droughts, floods, tornados, etc.

Many of the criteria for minimally distorting safety-net programs apply equally to all types of programs. There are some differences, however, which arise because of the differing nature of the programs. To highlight these differences, the criteria are organized by type of program.

Net-Income, Revenue and Price Safety-Net Programs. Four critical criteria are needed for these programs. They are:

- The target variable should be based on a moving average of its market-determined value with a moving average as short as possible and no more than {X} production periods.

- The level of the safety-net should be no more than {Z < 100} percent of its moving average target.[9]

- The program should be jointly funded by producers and governments, with the government's financial share being no more than {Y < 100} percent.

- The programs should be actuarialy sound, with any draw-down of reserves being accommodated by lowering the level of the safety-net or by increasing farmer and government contributions in equal proportions rather than by government write-downs.

The values of {X}, {Y}, and {Z} would be internationally negotiated. The first criterion ensures that the safety-net adjusts to market conditions. Low values of {X} increase the speed at which the adjustment to market conditions occurs. The second criterion insures that stabilization programs provide safety-nets, not hammocks! Coverage is only provided when the market value of the target variable falls to {Z} percent of its moving average value. Actual coverage equals the safety-net value minus the market value of the target variable.[10] Such low slung safety-nets should provide minimal production incentives to farmers. The remaining criteria determine the total amount of publicly funded risk reduction that is allowed. The government's share of the cost of the program is limited to {Y} percent with the remainder paid by farmers. The final criterion ensures that governments' do not circumvent the other criteria by bailing out the safety-net fund during extended pay-out periods.[11]

Crop Insurance. Crop insurance is a feature of the agricultural policies of almost all developed countries. Actual schemes vary across countries in such matters as product coverage,

Commodity Specific versus Generally Available Safety-Net Programs

Existing safety-net programs are almost invariably commodity focused. As such, they reduce risk and distort production in favor of those commodities covered by the programs. It is tempting to argue that this distortion should be removed by requiring that safety-net programs be generally available to all agricultural commodities, and provide a similar rate of risk reduction to each. However, these criteria would lower the riskiness of agricultural production relative to non-agricultural production and it is unclear whether the resulting distortion would be larger or smaller than that caused by a limited number of individual commodity programs.

General availability would also require governments to expand existing programs and require a legal definition of "general availability." For example, if a country has in place a safety-net program for a particular commodity (e.g. grains), it would be required to develop similar programs for other commodities (e.g. fruits, vegetables and livestock). It would also be difficult to design programs which provide similar levels of risk reductions across all commodities.

If "general availability" is deemed a necessary criteria for non-distorting safety-net programs, commodity specific safety-net and *ad hoc* disaster assistance programs would be disallowed. In order to avoid a plethora of safety-net programs for minor agricultural commodities, and the administrative costs associated with these, an attractive option would be to replace individual commodity programs with a generally available farm income safety-net.

the establishment of historic average yields, the loss coverage levels, the valuation of insured crops, and the government's share of premium and administrative costs. These matters are the subject of intense internal debates, with farmers' wishes for more extensive loss coverage and more generous subsidies being traded off against governments' desires to limit public expenditure and to avoid the problems of adverse selection and moral hazard, including the encouragement of production in high risk and environmentally sensitive areas. To our knowledge, there has never been an instance in which a country's crop insurance programs have been challenged by other countries because they were so "rich" as to encourage production and by that cause trade distortions. Still, it may be necessary to establish criteria that ensure that such programs remain essentially production and trade neutral:

- Established (program) yields[12] should be based on a moving average of actual yields for no more than {X} years.[13]

- The coverage level should be less than {Z1} percent of established yields and yield shortfalls should be valued at less than {Z2} percent of local market prices minus transport and handling costs.

- If yield and price electives are available, farmers should pay the full premium costs of insuring beyond the basic yield and indemnity levels, and premiums should vary directly with the yield coverage and valuation provisions.

- The program should be jointly funded by producers and governments, with the government's financial share being no more than {Y < 100} percent.

- The programs should be actuarial sound, with any drawn-down of reserves being accommodated by lowering the level of the safety-net or by increasing farmer and government contributions in equal proportions rather than by government write-downs.

These criteria are nearly identical to those for price and margin safety-net programs. The major difference is that rules for valuing yield losses are also required.

Disaster Relief. Governments typically respond *ex post* to the plight of farm families and regions affected by unpredictable catastrophic natural events such droughts, floods, tornados, etc. that usually are local (but may sometimes be national) in scope. Governments normally bear the cost of such assistance and disaster relief could conceivably distort production patterns within a country by favoring regions prone to disaster. However, disaster assistance has not been of international concern in the past and may only require internationally prescribed criteria for when such assistance may be provided.

- Established yields should be based on a moving average of actual yields with a moving average of no more than {X} years.

- The coverage level should be less than {Z1} percent of established yields and yield shortfalls should be valued at less than {Z2} percent of local market prices minus transport and handling costs.

These criteria are identical with those for crop insurance except that criteria referring to the financial soundness of the program and farmers' share of the cost have been deleted. The key parameter is Z1, which determines when a disaster has occurred and assistance may be given. If crop insurance is also offered, the parameter Z1 should be less than the equivalent parameter for crop insurance. Otherwise, governments could circumvent the requirement that crop insurance be actuarialy sound.

Similar criteria may be needed for programs that offer disaster assistance to livestock producers. The criteria could be based on disaster-induced declines in pasture yields or animal herds, or increased feed costs.

The availability of *ad hoc* disaster assistance will affect farmers' decisions concerning participation in other safety-net programs. As a result, governments may wish to impose additional rules to encourage participation in these other programs:

- Disaster/Drought relief payments should not be made for damaged crops when crop insurance is available. Payments could be made for livestock losses and damage to physical facilities.

- Alternatively, *ad hoc* payments should be used to reduce producers' crop insurance premiums so as to encourage participation in crop insurance programs.

Other Issues. Several other design criteria for safety-nets could conceivably affect the degree of trade distortion, budgetary costs, and the efficiency of domestic resource allocation. Should such programs be mandatory, should the target variable and safety-net be set at the individual farm level or based on regional averages, and should risk premiums be set at the farm level? These features could affect farmers' decisions to participate in the programs and their production and input combinations. If the programs are voluntary, for example, only farmers in more risky areas or who are otherwise more likely to receive payment may join the program (adverse selection). If the target variable is set at the regional level, individual farmers who suffer losses will not receive benefits when regional averages indicate no payouts are to be given,

and vice versa. If premiums are not tailored to the individual farm, farmers may alter their production techniques and by that increase the probability of collecting payments (moral hazard). These issues may affect resource patterns within a country and budgetary costs, but their total impact on trade distortions is likely to be small. We therefore do not include critical criteria that take them into account.

Infrastructure and Rural Development Subsidies

Besides farm income goals, governments use direct and indirect subsidies to meet a wide variety of social and economic development goals. Of concern to a nation's trading partners is the use of these subsidies, with laudable goals, to unfairly subsidize domestic production and thus to increase competitiveness in home and third-country markets. GATT contracting parties have been unable to devise an effective code for disciplining the use of subsidies for industrial products, and the existing dispute settlement process is ineffective. But, efforts to discipline the use of these subsidies in agriculture should draw from previous and on-going negotiations on the Subsidies Code.

Contracting parties have been unable to agree on the definition of a trade-distorting subsidy in the application of the Subsidies Code, and so have been unable to devise an "effective" illustrative list of permissible subsidies. Because of this, notification requirements also have been difficult to enforce. To resolve these difficulties, the current negotiations are using a "traffic light" approach. The negotiations are also attempting to develop an effective dispute settlement process. The proposed dispute settlement process would shift some of the burden of proof to the allegedly offending country. Policies that fall into the "red light" category would be directly "actionable" without prior use of a GATT panel or other multilateral aspects of current dispute settlement. The burden of proof would then be on the alleged offending country to show that its subsidy program did not distort trade. Action against "amber light" policies, which have more ambiguous trade impacts, would require prior resort to multilateral dispute settlement processes.

In the context of the agricultural negotiation, several broad types of policies are important in the negotiations on the Subsidies Code. These include policies to promote economic development and growth, such as infrastructure and rural development expenditures, policies to provide economic adjustment assistance and policies to stimulate private capital formation. Also important are policies to provide public goods and/or correct market failure. Examples of the latter are conservation and environmental subsidies. But, these subsidies may need separate treatment in the agricultural negotiations because they are often targeted to agriculture.

Trade Distortions

There is no neat and clean way to determine those policies that are to be included in the negotiations. Nor are there ways to determine those that distort trade in an objectionable manner. The theory of public goods, and of market failure, may be useful in developing guidelines for classification of these policies. Certainly, policies that are shown to provide public goods internationally should be classified as "green light" policies. An example is government-funded research where the benefits of that research are freely available internationally. In any case, these issues could be addressed in the negotiations over the GATT Subsidies Code rather than in the agricultural negotiations.

Reinstrumentation Criteria

Agreement should be reached that direct government subsidies are the only acceptable way to meet social objectives. In contrast, increasing producer prices by whatever means is an unacceptable way to accomplish the objectives of these types of programs.

General public use and availability are characteristics of public goods; subsidies that increase the availability of public goods do not distort trade. On the other hand, subsidy programs that are targeted to a certain region, or a subset of producers, may provide an objectionable commodity-specific subsidy. For example, a transportation subsidy should provide an equal benefit to all users to be non-trade distorting. It is the implementation of the program that will determine if it causes an objectionable trade distortion. The critical criterion is:

- neutral eligibility requirements or the absence of any restrictions that limit access to a particular industry or enterprise;

"*Specificity*" describes the use of domestic subsidy programs to target specific producer groups, or even to specific, sub-national regions. Neutral eligibility criteria would reduce the opportunity for nations to use these types of policies as indirect subsidies. Since nations will view their situation as unique, agreement should be sought on the obligation to provide information on potentially trade-distorting programs, and on the procedure to submit disputes to arbitration.

Environmental and Conservation Subsidies

In all developed countries, concern for environmental degradation has increased in recent years and is expected to increase even more in the future. This concern has prompted the adoption of many programs to conserve soil, water and air quality, and to conserve attributes of the rural community. From a trade view, programs that meet these objectives should not subsidize production; the least trade-distorting policy instruments should be used in meeting those objectives.

Trade Distortions

In most nations, conserving the natural productivity of land is an accepted government objective. The concern with soil conservation is reflected in national programs like the Conservation Reserve and the Conservation Compliance Programs of the United States. These programs may be viewed as potentially trade distorting since they could be disguised subsidy programs.

The European Community maintains that a benefit of the Common Agricultural Policy is the amenity of a pleasing and attractive countryside. The rural areas of Europe have been likened to the national park systems of North America. Besides the support provided by the border protection inherent in the CAP, individual member states subsidize certain production practices and other activities in rural areas. Maintaining rural viability is, then, a matter of importance to society beyond its economic aspects. Japan maintains similar objectives for some of its agricultural policies.

To those outside Europe and Japan, this logic sometimes appears to be nothing more than an attempt to justify the trade isolation inherent in their domestic agricultural programs. Irrespective of the external criticism, rural attractiveness is an accepted objective of agricultural policy in many countries. The uncritical acceptance of that objective, however, does not justify

the isolation of domestic agriculture from international market forces. There are ways to provide these environmental amenities that are less-trade distorting than border measures.

Reinstrumentation Criteria

Environmental and conservation programs often involve two very different types of objectives. Programs may to be designed to reduce the negative externalities of agriculture - degradation of water quality, soil erosion, etc. -- or to increase the positive externalities - environmental amenities, etc. Achieving these two objectives can have very different impacts on output and they are best analyzed separately. Both involve market failure - private costs (or benefits) deviate from social costs (benefits).

The negative environmental externalities associated with agricultural production are usually caused by intensive input use -- soil erosion from production on marginal lands, water contamination from fertilizers, pesticides, and feedlot wastes. Many of these problems are the result of the over-production caused by current price and income supports and would be alleviated as countries eliminate their trade-distorting policies. Barring this, the preferred mechanisms for dealing with them are to legislate restrictions on or to tax the domestic use of chemicals and environmentally degrading agricultural practices. Either of these mechanism leads to a contraction of agricultural output and could be permitted under the GATT.

- Legislative restrictions, or taxes, on the domestic use of chemicals and other environmentally degrading agricultural practices would be permitted under the GATT.

Governments also use subsidies to achieve environmental and conservation goals. This is particularly the case with conservation programs, which are often classified in the same category as environmental programs. The reason is that governments can sometimes meet both goals using the same policy instruments. Policies to reduce soil erosion, for example, preserve agricultural productivity as well as reduce pollution. The justification for these subsidies is that the market does not put the same value on the long-term productivity of land as does society.

These subsidies take two forms, one of which potentially expands output while the other often contracts output. Under the first, a government pays farmers to adopt conservation practices. Such subsidies could over-compensate farmers and thus provide a disguised form of support. Thus, the first criterion for non-distorting conservation/environmental subsidies is that:

- Conservation/environmental subsidies should be tied directly to the cost of the conservation/environmental practice being adopted.

Some desirable conservation/environmental practices are inputs in the production of agricultural commodities and subsidizing them would distort trade. Thus, it also may be necessary to draw up a list of internationally approved environmental/conservation practices that can be subsidized.

- Subsidies are allowed only for internationally approved environmental/conservation practices.[14]

Alternatively, the subsidies could be based on competitive bid from individuals willing to meet environmental/conservation related eligibility conditions. These eligibility conditions would not contain a requirement for agricultural production.

- Subsidies should be based on competitive bids from individuals willing to meet environmental/conservation related eligibility conditions. No agricultural production would be required.

The second type of subsidy occurs with resource retirement schemes such as the U.S. Conservation Reserve. Such subsidies clearly distort trade since the subsidy is directly related to output -- in this case a contraction of output. They should generally be allowed, but there is a danger that they might be used to over-compensate farmers for removal of the resource and that they may attract resources into agriculture to later receive the subsidies. If these are serious concerns in the GATT, such subsidies could be limited to a fixed historical base. To prevent overcompensation, one could require that these subsidies be based on competitive bids from farmers willing to retire the resource for a specified period. Under these criteria, long-term area reduction programs and annual paid land diversion programs would both be allowed.

Alternatively, the period over which resources must be retired could be negotiated. One could, for example, require that the resource be permanently retired from agriculture. Under these criteria, annual paid land diversion programs would not be allowed.

For a positive externality, the provision of the amenity is less than that desired by society. This necessitates policies to equate marginal private benefit with marginal social benefit. Price supports could be used to raise private benefits, but these increase market prices, thus providing the amenity through increased production while depressing demand. Providing the optimum level of the amenity creates an unacceptable trade distortion, at least according to a country's trading partners.

The same level of the amenity could result from a direct payment without the negative demand side effects, and a reduced trade distortion. But, production remains distorted. If the amenity can only be provided by expanding agricultural output, it is impossible to devise a non-distorting program to meet the policy objective. Yet, it is possible to break the association of the amenity with agricultural output. If this is done, non-distorting payments as discussed previously in the section "Direct and Indirect Farm Payments" could be provided.

Stock-Holding Programs

The primary objective of government stock-holding programs is to stabilize domestic prices. Such programs are used to provide a floor price for producers and a ceiling price for consumers. Over the short-term, government stock-holding programs might be used to even out seasonal fluctuations in prices. Such public intervention also might be justified because of inadequate private storage facilities, an absence of futures markets, or imperfect information.[15] Long-term stock holding might be used to build a food security reserve and be justified for reasons of food security or because of limited foreign exchange reserves. Food reserves held by exporting countries also might be used as a source of *bona fide* food aid as discussed in a later section.

Governments currently use two types of mechanisms to stabilize domestic market prices. Border measures are used to insulate domestic markets from variations in world prices. Simultaneously, many countries operate directly on the domestic market through buffer stock operations. A GATT agreement that resulted in the total elimination of border measures would leave stock-holding programs as the one remaining mechanism available to governments to stabilize market prices.[16]

However, the ability of countries with open borders to stabilize market prices would be very limited. Countries with little market power and limited resources would be unable to

defend a domestic floor price during world price downturns. During a world price upturn, a food security reserve could be used to limit price increases on the domestic market, but border restrictions would be required to prevent stocks from being exported at higher world prices. This is an issue in the discussion on whether GATT's Article XI:2(a) should be eliminated.

Finally, unless such activities are coordinated multilaterally, there would be a tendency for a few countries to bear most of the burden of international stock holding. In the case of a world price downturn, for example, the country with the highest domestic intervention price will begin building stocks before other countries.

Trade Distortions

Market price stabilizing stock-holding programs can involve two types of support to the farm sector. The first arises if government intervention prices are held persistently above world market prices. This source of support would be substantially eliminated if all border measures are removed. The second source of support arises from the actual cost of storage operations -- primarily subsidized storage costs and below-market interest rate charges. These subsidies are effectively marketing subsidies that should be eliminated. However, food security is a primary concern of many GATT contracting parties and publicly-financed food security reserves may be one of the least distorting mechanisms for achieving this objective. If such reserves are permitted, subsidies for storage operations also must be allowed.

Reinstrumentation Criteria

The critical criterion for non-distorting stock operations is that:

- Except in cases of *bona fide* domestic or international food aid, stocks must be sold at more that the purchase price.

This criterion would be difficult to implement in practice since the subsidies involved with stock disposal are not always apparent when marketing channels are controlled by public intervention authorities. Also, items held in stock cannot be individually priced and the requirement that stocks be sold at more that their purchase price can only be checked via the financial accounts of government interventions agencies. Thus, criteria regarding the financial accounts of intervention agencies and the transparency of those accounts are also needed:

- There should be no net cost to government stockholding operations - excluding storage and administrative costs - over a specified period.

- The financial accounts of intervention agencies, including state trading agencies, must be transparent and available for scrutiny in the GATT.

Orderly Marketing Arrangements

One problem in international agricultural trade policy is the use of one-to-three word vocabularies to encompass myriad programs and institutional arrangements that aim to achieve a multiplicity of objectives. So it is with the term "orderly marketing." This generic term is variously used in conjunction with interventions that reduce "disorder" in national agricultural and food markets. The usual manifestation of disorder is temporal instability in key economic variables (prices, margins, etc.). But, "orderly marketing" extends beyond stabilization objectives to include arrangements that enhance farmers' influence over their markets and their bargaining power within them.

To add to the confusion, the institutional arrangements for promoting orderly marketing can extend from: (1) such public interventions as safety nets, subsidization of storage facilities, public storage programs, and advance payments schemes; through (2), the creation of state or parastatel agencies with varying levels of monopoly powers over domestic marketings and exports or imports; to (3), various forms of farmer-controlled marketing agencies ranging from voluntary marketing cooperatives to mandatory producers' cartels. These distinctions are not clear cut. When producers' marketing boards are given the rights of first receivership of imports or exclusive rights to export, their potential to create trade distortions can be as great as that of state trading agencies (STAs). Yet, all the above arrangements that pass under the rubric of promoting orderly marketing potentially affect trade and the relative competitiveness of producers in different countries. Accordingly, they are proper objects of attention in the negotiations on agricultural and trade reform.

Trade Distortions

This section only addresses the activities of mandatory producer-controlled marketing agencies. The trade effects of public stabilization programs are discussed elsewhere in this report. Farmers' marketing cooperatives are assumed to have no trade impacts because of their voluntary character, regional confines and lack of market and control powers. State trading deserves separate and explicit attention because of its pervasiveness in international commodity markets, the weakness of the disciplines that GATT's Articles II and XVII impose on STAs' behavior, and because of the international community's discontent with the unquestionable trade distortions caused by such bodies as Japan's Food Agency and Livestock Industry Promotion Corporation and with the alleged trade effects of such selling agencies as Canada's and Australia's Wheat Marketing Boards.

Some practices of national producers' marketing agencies are not so much the cause of trade distortions as being made possible by restrictive trade arrangements. Chief amongst these are the actions of the price-setting/supply management boards found in Canada and in some other countries. The demand-side consumption suppressions and import access barriers associated with these schemes should be addressed by reducing the wedge between national and international prices and by changes to the provisions and disciplines of Article XI of the Agreement.

Marketing orders, agreements, and plans implemented by producers' commodity marketing boards are found in many countries. The powers exercised and functions performed by producer agencies are so diverse that a case-by-case approach (with offending agencies being identified by a counter-notification process) is almost mandatory. Nonetheless, it is possible to differentiate agency activities that are presumptively non-trade distorting from those that may cause discontent among trading partners.

The list of minimally trade-distorting practices includes the following:

- Producer-financed market development programs for changing consumers' tastes and preferences and finding new markets and uses for farm products;
- Market research and the dissemination of market intelligence;
- Inspection, grading and package standardization services designed to enhance consumer satisfaction and to facilitate exchange;
- Collective bargaining with buyers on price and conditions of sale;

- Single-desk selling systems designed to ensure competitive pricing and equitable access to and treatment in the marketplace, and to minimize the costs of assembly and transfer of title;

- Control of the rate-of-flow of product to market and of spatial distribution;

- Raw product pricing systems that discriminate between national buyers and usages within the limits set by open borders.

Activities of producers' marketing agencies that would be internationally unacceptable include:

- The deliberate use of inspection and certification systems, packaging and labeling requirements, health and sanitary standards and grade specifications as non-tariff barriers to trade;

- The exercise of the power of discretionary import licensing and the right of first receivership in ways that discriminate against imports;

- Price dumping in export markets.

Reinstrumentation Criteria

There are a variety of approaches to minimizing the adverse trade effects caused by producer marketing agencies. The criteria given below, provide a handle on the misuses by producers' marketing boards of technical regulations, import rights and two-price plans.

For example, the use of technical standards as NTB's should be eliminated by:

- Obtaining a commitment that regulations will not be used to protect domestic industries;

- Eliminating technical regulations that are not necessary for the protection of plant, animal and human health;

- Basing necessary regulations on international standards;

- Accepting the equivalence of national inspection and certification systems; and

- Subjecting disputes to impartial scientific adjudication.

In the case of discrimination against competing imports,

- The principal of national treatment should be enforced.

If significant import barriers remain after the MTN,

- Article XVI and the anti-dumping code should be strengthened to outlaw two-price plans that involve producer-financed export dumping.

Alternatively,

- A Canada/US Free Trade Agreement-type rule against discriminatory export pricing by "public entities" might be written into the GATT.

International Food Aid

The U.S. GATT proposal exempts *bona fide* food aid from its ban on export subsidies, but fails to define this concept. The exemption recognizes some forms of food aid as desirable within the context of GATT rules; but the introduction of the term *bona fide* suggests that food aid programs or specific shipments would have to pass some sort of GATT test. There is a double-edged interest in international food aid: on the one hand, developing country importers desire assurances that agricultural policy reform will not bring them added food security problems; on the other hand, exporting countries are concerned that food aid not substitute for commercial export subsidy programs. Thus, Uruguay Round participants have an interest in both protecting and disciplining food aid.

Trade Distortions

The trade distortions caused by food aid depend on two factors: the effective purchasing power and humanitarian needs of the recipient population; and the characteristics of the food-aid program. The first is addressed by identifying the level of trade distortions likely to occur for different recipient populations; the second by identifying the characteristics of food aid programs likely to distort trade, and those that will minimally distort trade.

GATT-legitimate food aid has a humanitarian component. Humanitarian goals can, of course, be narrowly or broadly defined. Three levels of food-aid need might be delineated to identify acceptable aid. Each level of need would call for a different GATT rule with the least critical needs category requiring the most stringent GATT test for the particular food-aid program.

Level 1: Where an identifiable population lacks any effective demand for food such that food must be distributed at zero cost to the recipient to prevent starvation or malnutrition. *All* food aid given under these conditions *would* be designated as acceptable.[17]

Level 2: Where an identifiable population has insufficient effective demand for food such that food must be distributed at less than market price to prevent starvation or malnutrition. *Some* food aid given under these conditions *would* be designated as acceptable.[18]

Level 3: When the recipient population has effective demand for food imports, but food expenditures preclude adequate spending on economic development. *Some* food aid given under these conditions *might* be designated as acceptable.

Under this framework, the first criteria for non-distorting food aid would be the association of that aid with a clear-cut food or development need. Existing international food aid institutions, such as the World Food Program of the United Nations and the existing Food Aid Convention, should be helpful in categorizing recipient countries or groups according to their food aid needs; that is, in identifying the locations of chronic shortages and the need for temporary disaster relief. Illustrative lists of food aid to promote economic development also could be constructed with the help of these agencies (eg. food-for-development programs).

The use of food-aid programs with certain characteristics would also limit the likely extent to which food aid would displace commercial trade sales and so distort trade or shift trade in

favor of the food-aid donor. Examples of food aid programs with low probabilities of creating commercial trade distortions include:

- Cash grants for the purchase of food by the recipient where the grant is not tied to purchases from the original donor. Grants could be made on a government-to-government basis but would preferably be funnelled through nongovernment or multilateral aid agencies.

- Food grants or concessional sales when the food is acquired by the donor through open market purchases from the least-cost supplier or, possibly, through triangular transactions involving LDC suppliers. The more closely the aid supplied in this manner accords with a predetermined food aid need, the less is the likelihood of a distortion in the recipient country's domestic market.

- Food grants or concessional food sales from government-held stocks, so long as stock levels reflect the donor's negotiated share of predicted food-aid needs, stock disbursements closely match food aid needs, and stocks are acquired through GATT-legal means.

Examples of food-aid programs with higher probabilities of distorting commercial trade include:

- Cash grants tied to food purchases from the original donor, whether the grants are bilateral or channelled through multilateral aid agencies.

- Food grants or concessional sales of food where the food is acquired from the donor's domestic suppliers while lower-cost supplies are available elsewhere.

- Subsidies to the donor's exporting firms which then provide food grants or make concessional sales.

Reinstrumentation Criteria

The first criterion for *bona fide* food aid is that it be associated with a clear-cut humanitarian need. That need could be defined by existing international food-aid institutions such as the World Food Program, etc.

- All Level 1 food aid is acceptable.

The potential for commercial trade distortions increases as the emergency of the food aid need declines and development or food-security objectives increase. Food aid directed at Level 2 needs might be monitored and disciplined using the FAO's Committee on Surplus Disposal and the World Food Program's *Usual Marketing Requirement (UMR)*. The *UMR* is used whenever a country requests food aid to indicate its commercial trade effects. *UMR* calculations are based principally on the average commercial imports of the recipient over the preceding five years. In addition, several other factors are considered, such as:

- a substantial change in the recipient's production in relation to consumption of the commodity concerned;

- evidence of a significant trend during the reference period in the recipient country's commercial imports of the commodity concerned;

- a substantial trend in the recipient country's balance of payments or general economic position;

- any exceptional features affecting the representativeness of the reference period; and

- any other considerations that the government may raise in its request for aid.

Reliance on *UMR* monitoring is less necessary when the food aid mechanisms themselves are less likely to be trade distorting.

Level 3 food aid has a higher likelihood of replacing commercial imports, therefore the GATT might require Level 3 food-aid programs to have certain characteristics. Food-aid mechanisms meeting the following criteria would have a very small potential to distort commercial trade:

- Cash grants not tied to purchases from the donor;

- In-kind aid from open market purchases at markets prices (although triangular transactions favoring developing country exporters warrant special consideration);

- Food aid channelled through multilateral donor organizations.

At the same time that GATT disciplines over food-aid programs are strengthened, the food-aid dependent members of GATT must be assured of its commitment to meeting legitimate food-aid needs. GATT member countries might agree to review and to strengthen the Food Aid Convention that established minimum food-aid levels and donor shares, and remains in force through June 1991. It might agree to facilitate the augmentation of food aid supplies if policy reform should produce an insufficient supply response.

Executive Summary

The negotiating parties agree that only those policies that distort agricultural trade and thus affect a nation's trading partners are to be negotiated during the Uruguay Round. Of concern, therefore, are not the domestic policy objectives of governments, but the trade effects of the policy instruments they employ in pursuit of those objectives. Eliminating, or even substantially reducing, the price and income stabilization and support effects of domestic subsidy programs may not be politically feasible. In addition, governments' agricultural policies also promote politically-sensitive societal goals, ranging from environmental protection to food security. The instruments used with these policies often transfer income, affect farmers' and consumers' decisions, and therefore distort trade to some degree. But, whatever the goals of national policies, there is agreement that these diverse domestic policy objectives should be met by programs that minimize the level of trade distortion: agricultural policies should be *reinstrumented* to minimize their trade distorting effects.

An illustrative categorization of agricultural policies according to trade distortion is given below:

Presumptively trade distorting policies that are included in the AMS and/or subject to policy specific commitments to reduce trade distortions include:

- open-ended market price supports maintained with border measures; and
- open-ended direct payments and input subsidies.

Potentially trade distorting policies that may be included in the AMS and/or subject to policy specific commitments to reduce trade distortions include:

- market price supports with supply restrictions;
- income support (direct) payments and input subsidies with payment limitations;
- safety-nets: producer price/income stabilization and crop insurance;
- subsidies for infrastructure and rural development;
- domestic subsidies for conservation or environmental practices;
- orderly marketing arrangements;
- stock-holding programs; and
- international food aid.

Presumptively non-trade distorting policies that are internationally acceptable without modification include a host of such public goods-type programs as:

- research and extension;
- vocational education;
- inspection, grading and other marketing services; and
- adjustment assistance.

Certain characteristics of policies determine their level of trade distortion (Table 2). For example, policies in the *presumptively trade distorting category* are characterized by the open-ended incentive to expand production. Within this category, the trade distortion arising from market price support programs are unambiguously larger than those arising from direct payments and input subsidies. Market price supports require border measures that drive a wedge between (and likely sever the link with) domestic producer and consumer prices and international prices. Direct payments and input subsidies do not cause a consumption distortion, and so these policies are less trade distorting than market price supports.

But, the trade distortions of market price supports can be reduced, or even eliminated, by supply control or management. The potential role of supply control in the negotiations received considerable attention by the Task Force with agreement having been reached on its broad implications for minimizing trade distortions:

- A strict limitation on the level of production that is eligible for support can effectively eliminate trade distortions; but, that the restrictive trade instruments required to enable price support regimes to operate should be obtained only by considerable concessions in terms of a minimum access commitment on the part of countries wishing to use that type of policy; and

- Supply control could qualify for credits in the negotiations if the total value of support were used as the aggregate measure of support.

Direct payments and input subsidies may have large production distortions depending on the characteristics of the program. If payments vary with the level of output or input use, the trade distortions are potentially large. In this case, payments to farmers or subsidized inputs affect farmers marginal revenue and marginal cost calculations, and so production decisions. Two alternatives will break the link between production and program benefits and eliminate trade distortions:

- Payments are independent of the level of production of specific commodities or use of particular inputs.

- The output or input levels that are eligible for payment are limited to below no-program levels and those eligibility levels are bound in GATT. Production of commodities or use of a specific input up to eligibility levels could be required.

Of course, the level of trade distortion could be reduced, but not eliminated, by reducing the eligible level below current levels.

General criteria for minimizing trade distortions for other policies in the *potentially trade distorting category* are:

Farm Safety Nets: Payments to farmers are market-oriented and provide farmers with an internationally agreed safety net for key target variables. The payments could be used to provide a safety net against losses in gross or net-farm income due to declines in prices, production, or both.

Infrastructure and Rural Development Subsidies: Subsidies for infrastructure and rural development, or other policies to promote economic growth, where the benefits of the subsidies are generally available.

Environmental/Conservation Subsidies: Subsidies for approved practices are tied directly to the cost of those practices. The preferred method of achieving environmental goals is to tax the domestic use of chemicals and other environmentally degrading agricultural practices.

Stock-Holding Programs: Government operated food security reserves or subsidized buffer stock operations do not involve border measures or export subsidies.

Orderly Marketing Arrangements: Activities do not deny national treatment to imports or act as implicit export subsidies.

International Food Aid: International food aid for truly humanitarian purposes cause minimal displacement of commercial sales. Trade distortions would be minimized by closely tying food aid supplies to food needs, by using untied cash grants and relying on multilateral food aid agencies for the distribution of aid, and by making purchases from least-cost suppliers.

If policies are reinstrumented to satisfy these general criteria, and to meet the specific criteria in Table 3, trade distortion would be within a *de minimis* standard. Policies not meeting these criteria, as well as those in the *presumptively trade distorting* category, would be included in a country's AMS and would be subject to AMS reductions. Alternatively, these policies would be subject to policy-specific commitments to reduce trade distortions.

Table 2. Relative Trade Distortions and Program Characteristics than Maximize Trade Distortions.

Objective/ "Type" of Program	Potential Trade Distortion	Relative Distortion Levels	Characteristics Causing the Greatest Trade Distortion for this Type of Policy
Income Support			
Market Price Supports	Most	3 to 6	Both production and consumption are distorted. Unrestricted (open-ended) production.
Direct Payments and Input Subsidies	High	2 to 5	Unrestricted (open-ended) payments that are directly related to agricultural output or input use.
Income Stabilization			
Direct Payment Safety Nets		3 to 5	The target stabilization variable is not related to market conditions. The program is not actuarialy sound, with draw-downs of reserves covered by government write downs.
Stock Holding		3 to 6	Both production and consumption are distorted. Dumping stocks at less than purchase price, a disguised export subsidy. Storage costs and interest charges are subsidized.
Orderly Marketing Arrangements		2 to 6	Both production and consumption are distorted. The deliberate use of non-tariff barriers Discriminatory import licensing Price dumping in export markets
Other Direct Payments			
Environmental and Conservation Programs	Low	1 to 4	Payments do not exceed the cost of conservation or environment practices. Subsidized practices are production inputs.
Infrastructure and Rural Development	Least	1 to 4	Payment eligibility is restricted; payments are directly related to output or input levels.
Other Programs			
International Food Aid		1 to 6	Food aid is a disguised export subsidy. Food aid displaces commercial sales.

Table 3. Specific Reinstrumentation Criteria for Selected Policy "Types."

Objective/ "Type" of Program	Specific Reinstrumentation Criteria that Eliminate or Reduce Trade Distortions for this Type of Policy
Market Price Supports	**Reduction**: Reinstrument to a direct-payment program, *or* limit the level of production through supply management. **Elimination**: Restriction of production to below no-program levels; restriction must compensate for the consumption distortion.
Direct/Indirect Payments	**Reduction**: Limit the level of production or input use that is eligible for support. **Elimination**: Payments do not depend on the production of specific commodities or use of a particular input. Alternatively, a limit on the output or input levels that are eligible for payment to below no-program levels. Production or specific commodities or use of a specific input up to the eligibility levels can be required.
Direct Payment Safety Nets	The target variable is based on a moving average of its market value with a moving average as short as possible. The safety-net is significantly less than its moving average target. The program is jointly funded by producers and governments, with a limitation on the government's share of premiums. The programs are actuarialy sound, with any draw-down of reserves being accommodated by lowering the level of the safety net or by increasing farmer and government contributions in equal proportions rather than by government write-downs.
Crop Insurance	Established yields are based on a moving average of actual yields. The program is jointly funded by producers and governments, with a limit placed on the government's share of premiums. The coverage level is a limited percent of established yields and yield shortfalls are valued at a limited percent of local market prices minus transport and handling costs. If yield and price electives are available, farmers should pay the full premium costs of insuring beyond the basic yield and indemnity levels, and premiums should vary directly with the yield coverage, and valuation provisions. The programs are actuarialy sound, with any drawn-down of reserves being accommodated by lowering the level of the safety net or by increasing farmer and government contributions in equal proportions rather than by government write-downs.

Table 3. Continued.

Objective/ "Type" of Program	Specific Reinstrumentation Criteria that Eliminate or Reduce Trade Distortions for this Type of Policy
Disaster Payments	Established yields are based on a moving average of actual yields. The coverage level is a restricted proportion of established yields and yield shortfalls are valued at a restricted proportion of local market prices minus transport and handling costs. Disaster/Drought relief payments are not be made for damaged crops when crop insurance is available (payments might properly continue to be made for livestock losses and damage to physical facilities). *Ad hoc* payments are used to reduce producers' crop insurance premiums so as to encourage participation in crop insurance programs.
Infrastructure and Rural Development	Neutral eligibility requirements or the absence of any restrictions that limit access to a particular industry or enterprise.
Conservation and Environmental Programs	Legislative restrictions or taxes on the domestic use of chemicals and other environmentally degrading agricultural practices would be permitted under the GATT. Conservation/environmental subsidies are tied directly to the cost of the practice being adopted. Subsidies are allowed only for internationally approved practices, *or* subsidies are based on competitive bid from individuals willing to meet environmental/conservation related eligibility conditions.
Food Aid	Food aid to prevent starvation or malnutrition, i.e. an identifiable population lacks any effective demand for food, must be distributed at zero cost to the recipient. Cash grants are not tied to purchases from the donor. In-kind aid comes from open market purchases at markets prices (although triangular transactions favoring developing country exporters warrant special consideration). Food aid is channelled through a multilateral donor.

Endnotes

[1] The Task Force acknowledges, without implication for the content of the report, the helpful comments of Don McClatchy of Agriculture Canada and T. Kelly White of the Economic Research Service.

[2] Such subsidies could be used to obtain some measure of food security. In this case, food security must be defined as maintaining the capacity to produce food, rather than food self-sufficiency.

[3] However, if Level 2-3 trade distortions are a concern in the GATT, countries could negotiate which policy objectives can be met with such program types and develop strict international eligibility requirements pertaining to those objectives. This would require negotiation of national policy objectives and an expanded list of criteria. An alternative would be to negotiate national limits on total payments allowed under Level 2-3 programs.

[4] By binding national eligibility levels in the GATT, governments would be required to design their programs so that payment eligibility levels are not exceeded.

[5] This option was proposed in an earlier IATRC report as a general way to support farm incomes. See "Designing Acceptable Agricultural Policies," Summary Report presented at the Symposium on "Bringing Agriculture into the GATT," August 1988, Annapolis Maryland.

[6] We make no distinction between output and input subsidies. However, there is one important difference which should be kept in mind. Subsidies on inputs in inelastic supply will cause fewer production distortions than output subsidies or subsidies on other inputs, even if the subsidy depends directly on the level of input use. For example much of the land, currently devoted to agricultural uses may stay in production even if all agricultural support were eliminated. Thus, fewer restrictions on the operation of land-based payments may be necessary.

[7] The minimum access commitment (MAC) represented by the term (X) could be made a function of the gap between domestic and world market prices, with the MAC increasing with the price gap.

[8] The way in which support provided to commodities subject to supply controls should be included in an AMS is a difficult and contentious issue. For a discussion of the problem and several suggested solutions see, "Potential Use of an Aggregate Measure of Support," IATRC Commissioned Paper No. 5 and the background papers by T.W. Hertel and E.T. Marinos; L. Mahe and H. Guyomard; and D. McClatchy contained in "Background Papers for Report of the Task Force on The Aggregate Measure of Support: Potential Use by GATT for Agriculture", IATRC, Working Paper 90-1, January 1990.

[9] If a program was funded entirely by the government then the value of {Z} would have to be lowered to reflect the absence of producer contributions.

[10] One could add a co-insurance factor of {V < 100} percent to this criteria. Payments would then be limited to {V} percent of the difference between the safety net and market value of the target variable.

[11] Since compensation under safety net programs automatically adjusts to market conditions, safety net programs could also be used to compensate farmers for trade reform. Compensation schemes are normally thought of as temporary programs which are limited to the length of the reform process. However, the programs would not need to be temporary if the criteria for non-distorting safety net programs are adopted. One critical difference is that safety net programs would only compensate farmers for a portion of the losses due to trade reform. If a higher level of compensation is desired, the safety net and government funding levels could be temporarily set at higher levels and the requirement that the programs be actuarial sound could be temporarily waived.

[12] Established or program yields are based on historical yields and used to determine eligibility for payments.

[13] The years of highest and lowest years could be excluded from the moving average formula.

[14] For instance, if farmers are offered subsidies to build tree lines to prevent wind erosion, the subsidies should be directly related to the cost of establishing the tree line. Establishment of a tree line would be an internationally approved conservation practice, but subsidizing the purchase of a tractor would not (even though the tractor might lead to better tillage practices). One might also require that the trees be naturally sustainable.

[15] Public marketing agencies with monopolistic powers may be a cause rather than a result of the lack of private involvement in storage activities.

[16] If border measures are allowed to stabilize domestic prices under the GATT, trade distortions could be substantially reduced by requiring that the domestic target price be based on a moving average of world prices. Countries would then negotiate the moving average formula and the price band within which domestic prices could be stabilized. The price band establishes a domestic ceiling price and a domestic intervention price. In effect, the band places upper and lower bounds on policy instruments such as variable levies and variable export subsidies.

[17] Both emergency and long-term aid to the poorest countries would be included in Level 1.

[18] Emergency aid to areas temporarily suffering food shortages might be included in this category, even if their underlying economies were strong.