MULTILATERAL TRADE NEGOTIATIONS THE URUGUAY ROUND

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Group of Negotiations on Goods (GATT) Negotiating Group on Agriculture: Technical Group on Aggregate Measurement of Support and Related Matters

PSE MEASUREMENT OF DOMESTIC SUPPLY CONTROLS

Background Note Prepared by the Secretariat at the Request of the Group at its Meeting on 24 March 1988

Introduction

1. Strictly speaking what the PSE measures in the case of supply controls as with other governmental interventions in agricultural production and trade, is not the measure itself but the explicit or implicit income transfers associated with it.

2. In general how the measurement is made will depend on the modalities of the particular supply control scheme and on the context in which it operates. In some, if not many cases, supply controls are applied in conjunction with non-tariff import restrictions and are thus measured by the external/internal price differential plus or minus any direct payments or levies. In other cases the measurement of a supply control will be based primarily on associated deficiency, diversion or other payments to producers from budgetary sources, with the external/internal price differential also being used to measure the income transfer effects of any tariff that may be applied.

3. The following section of this paper describes the PSE measurement of domestic supply controls in various situations using what may be described as the standard PSE methodology. Section II outlines some of the alternative econometric approaches to perceived measurement problems, and Section III comments in general terms on the issues under consideration.

I. Measurement of Supply Controls Using Standard PSE Methodology

4. If a production quota is imposed at the existing level of production and the quota is effective the aggregate, per unit (of production) and percentage PSE values for the product concerned would, other things being equal, remain unchanged (Case A). If the production quota is imposed at 90 per cent of existing production and no compensatory adjustments are made through internal prices or direct payments, then other things being equal, the aggregate PSE would decline and the per unit and percentage PSE values would remain unchanged (Case B). If compensatory adjustments are made through either the internal price or through direct payments in order, for

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example, to maintain gross income at its pre-existing level under Case A, all three PSE values would rise (Case C), although there would be a margin for making a compensatory adjustment without increasing the aggregate PSE.

5. For example, where current production = 1 000 tonnes, the world price = 30 units, the internal price = 50 units, the resultant PSE values would be:

	Aggregate	Per Unit	Percentage
Initial	20,000	20.0	40.0
Case A	20,000	20.0	40.0
Case B	18,000	20.0	40.0
Case C	23,000	25.6	46.0

6. If a production quota is not effective the resultant PSE values would depend on the extent of any penalties on above-quota production. In Case A, for example, the aggregate PSE would only remain constant if, <u>ceteris paribus</u>, the over-quota production receives the world price or is subject to a tax which is equal to the difference between the internal price and the world price.

7. Set aside programmes, whether linked to deficiency payment or market price support systems, will result in a reduction in aggregate PSE values for the product concerned if: (i) the programmes are effective in reducing production; and (ii) the variable outlays that would otherwise have been incurred (deficiency payments), or the implicit income transfer that is avoided (market price support), on the quantity not produced exceed the value of the set aside payments. Thus on the basis of the scenario described in paragraph 5 above, if production decreases by 10 per cent or 100 tonnes the savings in support (deficiency payments/price support) would be 2,000 units. If the set aside payments are equal to or less than 2,000 units the aggregate PSE would remain unchanged or decrease as the case may be, but in either case the per unit and percentage PSE's would rise.

8. While the foregoing describes the general situation with regard to supply controls based on set aside payments, it will be apparent that because such programmes operate on an inducement basis and output is therefore indeterminate it would be difficult to re-calculate PSE estimates as a basis for evaluating proposed commitments on such programmes.

9. The treatment of direct payments to producers as an inducement to set-aside land or withdraw other resources from production under supply control programmes, has been to allocate these payments to the PSE for the controlled product or to make an allocation to any replacement crop. In principle there would be an argument in favour of excluding such payments where the land withdrawn is idled or used for non-agricultural purposes, an argument that would be stronger in the case of one-off budgetary payments associated with measures that result in the permanent withdrawal of resources from agriculture, since such payments are essentially of a welfare character.

10. Another possible species of supply control is the production or guarantee threshold beyond which production is subject to reduced prices or penalties but where there is no explicit or quantitative limitation on production. In the market price support situation the PSE measurement of this type of supply control would be based on an external/price differential either weighted to take account of lower prices on above-threshold production, or adjusted by deducting negative transfers associated with penalties or co-responsibility levies. The effectiveness of such supply controls would only be reflected in a constant or reduced aggregate PSE if penalties on above-threshold production, or levies on total output, were to offset the PSE impact of any reduction in world prices for the product concerned.

II. Econometric Alternatives

11. Within the framework of the static PSE methodology it is not possible, other than by making assumptions on the basis of an informed consensus, to determine the world price effects, or in some cases the production effects, of various measures including supply controls. It could be argued, for example, that although the imposition of supply controls at existing levels of production by a relatively large producer will not generate a PSE credit, the effect over time could be to raise world prices and thus to reduce PSE levels. This world price effect can be determined within the more dynamic framework of an appropriate econometric model and could be used to generate a corresponding PSE credit in favour of the country concerned. Given their limited impact on world markets, small producers would not be in a position individually to claim such credits.

12. In one sense this argument does not carry much weight because any credit for the measure will eventually show up in subsequent years' PSEs for the country and products concerned. In these circumstances to concede an artificial credit against a base reference PSE would either constitute a windfall or double counting. Subsequent downstream corrections could be made but it would be difficult to justify such a complex procedure, particularly where a number of countries are reducing support in concert. There are also, of course, the counter arguments with respect to debits.

13. Another method of generating credits in respect of supply controls already in force during any PSE base reference period, or controls subsequently introduced at existing levels of production (see Case A, paragraphs 4 and 5 above), would be to estimate the (lower) guaranteed price that would produce the same level of output as under the production quota or supply control. This hypothetical price would then be used to reduce the external/internal price differential in the calculation of the PSE for the product concerned. Another approach would involve using an econometric model to simulate the production that "would have been" produced at the internal price and to treat the hypothetical PSE on this extra production as a credit against the base reference PSE. MTN.GNG/NG5/TG/W/5 Page 4

14. In this general area, and quite apart from the double counting aspect, there would appear to be little if any justification in PSE terms for giving credit for taking action against a problem that another set of policies had initially created. In any event the alternative measurements rely heavily on assumptions about supply and demand elasticities and on such complex matters it would be rather difficult to reach agreement in a negotiating context.

<u>General</u>

15. The calculation of PSE estimates in respect of domestic supply controls does not give rise to exceptional methodological problems. Supply controls are usually embedded in price or income support policies of one sort or another and it is essentially income transfers associated with such policies as modified by the supply control that are measured on the basis of price differentials and budgetary transfers. One issue that does arise is the question of whether certain direct payments to producers to induce them to withdraw resources from production should be excluded from the PSE calculations. Payments to withdraw land permanently from production is an example where exclusion would be justifiable but in other cases somewhat broader issues could be involved, including whether the payments in question might be regarded as a form of decoupled support.

16. Under Options I and II in NG5/TG/W/4 the impact or value of supply controls in PSE terms is a matter of some relevance. The total monetary or aggregate PSE is responsive to changes in production as well as to changes in external/internal price relationships and direct payments. As such the aggregate PSE would seem to constitute an appropriate basis for measuring ascertainable changes in levels of production and related support arrangements. Although aggregate PSE's are country specific and are not as such comparable between countries, percentage changes in aggregate PSE's would arguably provide a limited basis for comparing the relative value of changes in support at the margin for both small and large countries.

17. What aggregate PSE's are not equipped to do is to measure the prospective changes in output or world prices resulting from changes in supply controls. That is a matter of some relevance in the context of recalculating base reference PSE's to reflect proposed or possible changes in supply controls and would probably have to be done, on the basis of informed assumptions about otherwise unascertainable variables.