

## **Domestic Support and the WTO: Comparison of Support Among OECD Countries**

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### **Introduction**

Domestic farm support policies are a source of market and trade distortions. As members of the WTO, countries committed to limit their spending on domestic agricultural programs presumed to be the most trade distorting and to exempt other programs from any limitations under a set of special conditions. The continuing challenge for WTO negotiations on domestic farm policy will be to obtain effective commitments to reduce agricultural trade distortions, while allowing countries flexibility to use minimally trade distorting policies to achieve their own national priorities. Part of the task facing trade negotiators is determining where and how to draw the line between benign policies and trade distorting policies.

The purpose of this paper is to develop a database that classifies support into production and trade distorting categories that are useful in describing and comparing the structure of policy across countries and commodities for a consistent time frame. The classification design aims to show differences in the types of programs used to implement agricultural policy and differences in the potential for each program type to distort production and trade. The classification system is illustrated in table 1. We merge information on policy structure from the OECD's PSE database for 2000 and from the WTO's domestic support notifications in order to measure the use of alternative policies.

### **Classifying Production and Trade Impacts**

All domestic support policies have some effect on production and trade, but the magnitude of the effects vary considerably among different types of policies (Westcott and Young, 2000 and Rude). URAA negotiators classified domestic support programs into three categories: amber, blue, and green. Amber box policies were considered the most production and trade distorting, and these were to be disciplined under the Agreement. The Agreement defined a single, quantifiable national indicator of trade and production-distorting support, the "aggregate measurement of support" (AMS), which includes the estimated value of amber box policies. Green box policies were considered to be the least distorting, and they were exempt from any discipline or limitations. Blue box policies were those that involved direct payments under production limiting programs, and they were also exempt from any limitations or disciplines. Policies such as market price support, direct payments based on current production levels or market conditions, and input subsidies that are linked or "coupled" to production were combined into the amber box. While this is a useful construct for negotiations, we contend that these broad categories obscure differences among programs that are important for policy analysis – specifically differences in programs' incentives and the strength of their links to production decisions.

**Market price support.** Market price support (MPS) policies, including tariffs, administered prices, and export subsidies, raise domestic producer and consumer prices above world price levels, simultaneously increasing production incentives while decreasing consumption incentives. For example, trade policies (tariffs and export subsidies) can be used to create a gap between domestic and world price levels. Administered prices in combination with trade policies

provide greater control over domestic prices. This price control is usually implemented through government purchase and storage programs, whereby the government agrees to acquire commodities at the announced minimum price. Subsidized exports or domestic consumption are frequently used to dispose of excess supplies.

**Output and input subsidies.** Output subsidies (direct payment programs linked to commodity production) and input subsidies provide incentives to increase agricultural production, leading to lower prices paid by consumers. These production incentives are greatest when the payments or subsidies depend on production of specific commodities or on the type or amount of inputs used. Production decisions then are based on the level of government payments in addition to expected returns from the marketplace. The resulting increases in production tend to reduce domestic prices leading to some increased domestic use as well as higher exports or lower imports.

Subsidies on intermediate and capital inputs raise output by lowering input costs, encouraging the use of more inputs that brings about increased output. As a result the mix of inputs used in the production process changes. Production of those commodities that use the subsidized input increases. Thus input subsidies create two types of market distortions: changes in the mix of inputs used for production and changes in the mix of final products produced.

Program incentives tend to be focused on specific commodities or groups of commodities. However, because changes in expected returns for one commodity affect relative net returns as well, thereby influencing decisions to produce other commodities, cross-commodity effects can occur. A coupled subsidy would likely alter the mix of crops planted, switching towards the subsidized (or more highly subsidized) crops. In addition, since some farmers would be able to expand land use, aggregate acreage could increase.

**Supply and payment limits.** Coupled output and input subsidies create production incentives for farmers through increased budget outlays. These outlays may be subject to other political-oriented provisions designed to keep total government outlays in check or the target benefits away from large and toward smaller sized farms. Payments linked to accompanying production adjustment, or supply control, provisions limit payments by reducing eligible payment acres and/or by reducing production eligible for costly government storage programs. Absolute limits on the amount of payments an individual can receive tend to refocus the benefits toward smaller size operations.

In the U.S., payment limits are used to cap payments to larger farmers. The EU<sup>1</sup> set aside and arable base restrictions associated with compensatory payments and the former U.S. acreage reduction program are examples of programs that limited total payment amounts by placing a limit on the number of acres (or other resources) that would be eligible for the related direct payments. Programs with set-aside requirements were classified as blue box payments and were not subject to WTO spending discipline during the implementation period, partly because it was assumed that the acreage limitations reduced production and trade distortions that would otherwise have been due to the direct payments.

**Farm based payments.** Farm based payments are a class of direct payments that are based on historical production or on farm enterprise characteristics.<sup>2</sup> These payments may be linked or

coupled directly to current non-commodity specific production, prices or market conditions. Alternatively, they may be based on historical production or income and be considered decoupled. Since payments are not linked to specific commodities or production activities, they create weaker production incentives than direct output subsidies linked to specific commodities or inputs and do not directly impact specific commodity prices. As a result these payments and the associated production impacts should not be attributed to specific commodities. Farm based payments may primarily influence aggregate production through increased wealth and investments or by altering risk perceptions. Note that all programs (coupled or decoupled) that increase income or wealth of farmers could have long-term impacts on investments and risk perceptions.

The extent to which farm based payments may affect production is the subject of debate (Westcott and Young, 2002). Farm based payments enable increased investments in farm operations. The payments, however, also provide incentives to invest in non-farm alternatives (eg., the stock market) or to increase personal consumption. Greater wealth and investment do not affect the relative marginal returns from production alternatives, allowing market signals in general to allocate any increases in production. Also, the costs and benefits associated with risk may be perceived differently by people as wealth changes. Therefore, farmers' production choices may change as their wealth increases.

The production effects of farm based payments are likely to be small, when the payments are based on historical production and payment levels are not expected to change based on current or future farm characteristics. As such, the WTO does not constrain use of these types of decoupled payments and allows them to be classified as part of the green box. Westcott and Young (2000) estimate that the additional wealth and investment created by U.S. production flexibility contract payments could add up to 0.3 percent to plantings of major crops in the U.S.

Farm based payments can have a larger impact on production decisions when the programs create expectations of future program benefits that are linked to current production decisions or when the payments are linked to current production or market conditions. For example, if farmers expect future payments to be based on current plantings, they may keep current plantings of those crops high. Farm based payments that are linked to farm-level or aggregate income or production or that are linked to prices create more direct production incentives and are considered to be partially coupled to production (e.g. U.S. market loss assistance payments). For WTO purposes these payments are classified as amber box. However, production incentives for amber farm based payments are less than for other types of amber box policies since the payments are tied to farm characteristics as opposed to specific commodities or production practices.

### **WTO notifications compared to the OECD PSE**

Neither the OECD data nor the WTO data are sufficient for a comprehensive and consistent comparison of the impacts of domestic support policies potential production and trade distortions resulting from domestic support programs. While countries report domestic support to the WTO, the reporting is sporadic and considerable lags occur in reporting. The US, for example, did not notify its 1998 domestic support to the WTO until June 2001. In the interim, US domestic

support increased significantly. Accurate representation of these changes is necessary for realistic policy analyses.

The OECD scheme provides a comprehensive list of policy types based on the method of implementation, thereby providing a particularly useful place to begin a study aimed at evaluating and comparing consequences of different policies. However, the OECD classification does not distinguish between production distorting and non-distorting programs. In addition, OECD allocates farm based payments to specific commodities, which is not the case.

Careful examination of individual countries' policies enables construction of a combined database that differentiates between programs based on their production incentives. In some cases, limited information, general descriptions, or the aggregation of different types of policies within one PSE category meant that we had to use our best judgement in developing the database. We aggregated the data to reflect countries' notifications of programs by WTO criteria (amber, blue, and green). The combined data set is also limited since non-OECD countries are omitted, however three OECD countries (the U.S., the EU, and Japan) accounted for about 80 percent of total WTO-AMS commitment levels (Young, et.al).

While both the PSE and the AMS are measures of domestic support, their concepts differ. Thus, without further manipulation, the PSE database cannot be used for analyzing options for domestic policy reform using current WTO criteria. The PSE is a broad concept designed to measure overall developments in agricultural policies, across countries, based on a measure of current benefits to farmers (or costs to consumers and taxpayers). The PSE has two components: market price support and budgetary outlays. It includes the effects of trade policies (import barriers and export subsidies) in its measure of market price support, which is calculated as the gap between the domestic producer price and a current world reference price times eligible production for each commodity. It also includes all government budget expenditures on farm programs, including WTO exempt (green box) outlays that are made directly to producers, all of the WTO nonexempt (amber box) subsidies, and all of the WTO blue box forms of domestic support.

The AMS is a narrower measure of support. In contrast to the PSE, the AMS measures only the domestic support that is subject to URAA disciplines (amber box policies). In general, the AMS excludes explicit trade policies (import barriers and export subsidies) that are covered by the PSE because these policies have separate conditions placed on them by the URAA. The AMS calculation also excludes support that does not exceed 5 percent of the member's total value of production (10 percent for developing countries), although this support is notified. Programs that meet specified criteria to be notified as minimally trade distorting are classified in the green box and are excluded from the AMS. Direct payments that meet specified production limiting criteria are classified in the blue box and are also excluded from the AMS.

A major difference between the PSE and the AMS is measurement of market price support (MPS). The PSE measures MPS for all commodities in the PSE database, calculated as the difference between the current domestic market price and a current world price. In contrast, the MPS is included in the AMS only when an administered price support program is operated in conjunction with trade policies. Also, the AMS MPS is measured as the difference between the

administered price and a fixed 1986-88 average reference price multiplied by current production. The reasoning is that the AMS price gap then reflects only the variables over which policy makers have control, rather than current market conditions. The AMS MPS therefore, can be used as a tool for keeping countries' programs under discipline, while the PSE MPS gives a more accurate measure of current protection.

### **Measuring Domestic Support**

Data from OECD's Producer Support Estimates (PSE) are combined with information from countries' WTO domestic support notifications in order to obtain a consistent comprehensive database that distinguishes between general program incentives. We define "domestic support" as a measurable economic concept based on the AMS. To calculate the PSE-based AMS, we reorganized and augmented the PSE data in four steps.

- First, we differentiate the impacts that different types of domestic subsidies can have on production and trade. Domestic subsidy expenditures are conceptualized as being separable into five generic types: subsidies linked to output; sector-specific subsidies to capital inputs; subsidies linked to non-capital inputs; whole-farm transfer payments that do not distort relative returns among specific commodities; and subsidies with minimal trade impacts. The categorization of countries' policies according to their production effects is based on the OECD PSE classification system and descriptions of the operation of specific policies and programs in the WTO notifications and other sources (table 2).
- We decomposed PSE data on budgetary outlays into green, amber, and blue box forms of support based on WTO notifications, when available, and on ERS calculations and judgement.
- Next, we identified commodities for which there are administered price support programs. For these commodities, we include the PSE measure of market price support in our calculation of the PSE-based AMS.
- The WTO AMS calculation also excludes support that does not exceed 5 percent of the member's total value of production (10 percent for developing countries). But this *de minimis* support is included in our estimates of the PSE-based AMS on the assumption that trade distortions do not begin or end when a threshold is reached.<sup>3</sup>

### **Domestic support programs by country<sup>4</sup>**

Domestic support levels were compiled for twelve OECD countries. Agricultural policy data are for 2000, the most recent year for which a comprehensive policy database could be assembled. Policy data are disaggregated by type of support, by commodity, and by country. To ensure that the data are comparable across countries, we limit the analysis to domestic support for the major commodities that are notified to the WTO (wheat, coarse grains, oilseeds, rice, sugar, dairy, beef, sheep, poultry, hogs, EU support for horticulture, and U.S. support for cotton and peanuts). This approach excludes data for miscellaneous commodities included in the OECD total expenditure categories.

As the two largest agricultural sectors, the EU and the United States dominate the results. They account for 70 percent of total value of agricultural production for the included commodities, total support, and total amber type support (table 3). In 2000 the total market value of agricultural production in the EU was approximately \$146 billion, while the total value of agricultural production in the US was approximately \$136 billion. The EU, however, provides

more support to its agricultural sector with amber-type support of \$42 billion compared to \$27 billion of support in the U.S. Inclusion of blue box and green box type support increases EU support to a total of \$68 billion and U.S. support to a total of \$37 billion. Most of the increased support for the EU is for compensatory payments and livestock premiums, which are notified as blue box, while the majority of the additional support for the U.S. is production flexibility contract and conservation reserve program payments, which are notified as green box expenditures.

**Market price support.** Over half of measured total support and over three-fourths of amber type support in the 12 OECD countries is market price support (MPS). Reliance on MPS varies greatly among the countries. More than three-fourths of support in Korea, in Japan, and in Poland is MPS, while Australia and New Zealand do not have any administered MPS programs. Selection of the measure of MPS has significant impact on our results. As previously indicated, we use the measure of MPS from the PSE database. For comparability to WTO reporting we limit MPS to only those commodities reported to the WTO as administered price programs for the individual country.

This approach may overstate MPS relative to actual WTO notifications. For a given level of world reference price, if the current market price exceeds the administered price, the calculated price gap for the PSE concept would exceed the AMS measure. And since a change in the world reference price will change the PSE measure—but not the WTO measure—the two measures can diverge. AMS data are available for various countries for 1998. To assess the impact of this assumption we substituted 1998 AMS-MPS for the 2000 PSE-MPS. Use of the PSE measure of MPS rather than the WTO AMS concept as this study does increases total MPS by about 16 percent. The PSE measure exceeds the WTO MPS for Japan (milk), Korea (primarily rice), and the U.S. (milk), while understating support for the EU (wheat, coarse grains and sugar) and Norway (milk and pigmeat).

Expansion of the MPS concept to include non-administered market price support as in the PSE concept (ie., tariffs and other import barriers) raises the measure of total MPS by 20 percent. Most of this increase is due to inclusion of MPS for rice in Japan. Japan greatly reduced its amber-type support when it changed its rice policy in 1998 (Dyck). Japan converted its rice support from an import quota with an administered price to a price support with land set-aside, moving measured support into the blue box and effectively removing rice MPS from its WTO domestic support commitment. The remainder of the increase in MPS is primarily associated with inclusion of MPS for pigmeat in the EU and coarse grains in Mexico.

**Payments.** All of the 12 OECD countries included in this analysis use some form of amber box payment, however, in 2000 the U.S. accounted for about three-fourths of the total. The U.S. uses a variety of amber box payment programs, but U.S. amber box payments are primarily output subsidies in the form of marketing loan benefits and market loss assistance payments (see Westcott and Young (2000) for a description of the U.S. programs). All countries, except Japan, use input subsidies that distort the production decision by encouraging the use of specific inputs.

Three countries, the EU, Japan and Norway, use blue box type programs to support their agricultural sectors. Blue box payments at \$27.0 billion exceeded total amber box payments of

\$22 billion made by all 12 of the countries included in this analysis. The majority of the blue box payments are EU payments of about \$20.4 billion in 2000. Norway's blue box payments comprise a much larger share of their value of agricultural production for the commodities included in this analysis (52% for Norway compared to 15% in the EU).

All of the countries studied also support agricultural producers using less distorting green box type programs.<sup>5</sup> Green box expenditures totaled \$21.1 billion in 2000 with U.S. production flexibility contract payments at \$5.3 billion being the primary example of this sort of support. Almost two-thirds of Mexico's support qualifies as minimally distorting.

### **Leveling support**

In the URAA countries committed to reducing domestic support from average support levels in 1986-88. It can be argued that this allowed countries with relatively high support in the base period to continue supporting their agriculture at a higher rate than other countries with relatively low support levels in the base period. Two alternatives for leveling support are considered here that would place upper limits on the level of support relative to the value of production. The first alternative limits total support for the included commodities to a fixed percentage of the total value of production for the commodities. With this alternative countries can maintain high support for preferred commodities such as milk and sugar. The second alternative, a more restrictive option, limits support to individual commodities to no more than a fixed percentage of the total value of production for the commodity.

While the level of support varies widely among countries, considerable variation in the overall level of support also exists among commodities, with milk and sugar generally receiving the highest support. Milk and sugar total support provided by the 12 countries are both about 45% of the total value of production (table 4). Support for grains, oilseeds, and beef averages 10 to 25% of the total value of production.

Table 4 provides some insights into the possible effects of any WTO proposal to reduce domestic support by leveling total support rates among countries and commodities. If WTO negotiators were to decide that the total support that a country could provide to its agriculture could not exceed 30 percent of the total value of production for all of the supported commodities, for example, only Iceland, Korea, Norway and Switzerland would need to reduce support. Inclusion of blue box support would add the EU to the list and require that Norway to make additional cuts.

A second alternative to level support might be for WTO negotiators to limit support for individual commodities to say 40 percent of the value of production, for example. In this instance, only Australia, New Zealand and Poland would not be required to cut support for specific commodities.

U.S. support for wheat, feed grains and rice illustrates some potential problems with farm based payments that might arise with efforts to limit commodity-level support. In 2000, U.S. producers of these commodities received marketing loan benefits, which are tied directly to current production. In addition, many of these producers received market loss assistance payments, which were paid on the same basis as decoupled production flexibility contract payments.

Market loss assistance payments are farm based transfer payments that are not linked to production of specific crops. For example, wheat market loss assistance payments were paid on 79 million acres, but only 62.5 million acres of wheat were planted in the United States for the 2000/01 crop year. Some of the market loss assistance payments were paid to producers who produced coarse grains and oilseeds or to producers who did not plant the land for crop production (they fallowed the land). Market loss assistance payments, therefore, are included in total support, but the payments are not allocated to the specific crops in table 4.<sup>6</sup>

### **Conclusions**

The type and level of agricultural support varies widely across countries and commodities. The distorting effect of policies depends upon both the economic incentives created by program parameters and the total amount of support provided. Policy data are categorized by the nature of production and trade distortions in this paper. This approach permits development of comprehensive and consistent database for trade liberalization and WTO related analyses and comparisons.

As the two largest agricultural sectors, the EU and the United States dominate the results, accounting for 70 percent of total value of agricultural production for the included commodities, total support, and total amber type support. Over half of measured total support and over three-fourths of amber type support in the 12 OECD countries is market price support, with Korea providing over 95 percent of its support as market price support. While the level of support varies widely among countries, considerable variation in the overall level of support exists among commodities, with milk and sugar generally receiving the highest support.

### **References**

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Table 1 Programs used in OECD countries		
Category	Production effects	Examples of policies
Market price support	<p>Raise producer and consumer prices above world levels.</p> <p>Tariffs raise the costs of imports and increase the use of domestically produced goods. Export subsidies are used to reduce domestic supplies and to develop future markets, which supports domestic prices.</p> <p>This price support can be implemented through government purchase and storage programs, whereby the government agrees to acquire domestically produced commodities at the announced minimum price.</p> <p>Administered prices in combination with trade policies, however, provide greater control over domestic prices.</p>	<p>U.S. sugar program (non recourse loan program and tariff rate quotas)</p> <p>EU export restitutions</p>
Fixed output subsidy	<p>Production incentives are greatest when the payments are tied directly to specific commodities, since production decisions are based on the level of government payments in addition to expected returns from the marketplace. The resulting increases in production tend to reduce domestic prices leading to some increased domestic use and higher exports or lower imports.</p>	<p>Japan's payments per ton for beet sugar</p>
Output subsidies tied to price – deficiency payments	<p>Production incentives are greatest when the payments are tied directly to specific commodities, since production decisions are based on the level of government payments in addition to expected returns from the marketplace. The resulting increases in production tend to reduce domestic prices leading to some increased domestic use and higher exports or lower imports.</p>	<p>U.S. loan deficiency payments</p> <p>Mexico's former guaranteed producer prices</p>
Capital subsidies	<p>Use of capital inputs increases, leading to a long-run increase in production of capital intensive products.</p>	<p>Investment tax credits</p> <p>Interest subsidies</p>
Other input subsidies	<p>Output increases for commodities that use subsidized input.</p>	<p>Irrigation and insurance subsidies</p>
Supply and payment limits	<p>Limit the expansion incentives of subsidies by linking payments to controls on eligible acres or production, or capping benefits for individuals.</p>	<p>EU supply controls, U.S. payment limits.</p>
Farm based payments	<p>Whole-farm payments increase land values, raise wealth and investment, and may change risk preferences. Aggregate output may increase slightly, but cross-commodity distortions are not created.</p>	<p>Canada's NISA</p> <p>U.S. production flexibility contract payments and market loss assistance payments</p>
Other minimally distorting payments	<p>Small increases in aggregate production.</p>	<p>Research and extension</p>

<b>Table 2 – Mapping domestic subsidies from OECD PSE data into WTO “colors” by OECD label for five countries</b>											
	Output subsidy, fixed per unit of output		Output subsidy, deficiency payment, endogenous, fixed producer price		Capital input subsidy, fixed per unit of capital input		Intermediate input subsidy, fixed per unit of input		Farm based		Other minimally distorting
WTO treatment	Amber	Blue	Amber	Blue	Amber	Green	Amber	Blue 1/	Amber	Green	Green
Canada	B1,B2				E3		C1, E1		.58*G1		D1,E2,.42*G1,H2
EU	B1, .81*B2	.19*B2, C2			E1(crops)	E3	C1(crops) E1(livestock)			D2,F1, F2,G1	C1(livestock), E2,F3,H1,H2
Japan	B1 (sugar)		B1(ex. Sugar)	B2		E1,E3					E2,E3,F2
Mexico	B1					E3	C2,E1			D1,G1,G2	C1,E2
U.S. 2/	Pt. B1,B2		Pt. B1				48 C1, .93*E1		.52*D2	.48*D2,.83 *E3	E2,F2,F3,.17*E3, .62 C1
OECD Classifications: B1-Based on unlimited output B2-Based on limited output C1-Based on unlimited area planted or animal numbers C2-Based on limited area planted or animal numbers D1-Based on historical plantings/animal numbers or production D2-Based on historical support programs E1-Based on use of variable inputs E2-Based on use of on-farm services						E3-Based on use of fixed inputs F1-Based on constraints on variable inputs F2-Based on constraints on fixed inputs F3-Based on constraints on a set of inputs G1-Based on overall farm income level G2-Based on established farm minimum income H1-Miscellaneous national payments H2-Miscellaneous sub-national payments					
1/ Norway has supply constraints associated with some of its input subsidies (c1). 2/ For U.S., .07 percent of E1 (fuel tax concessions) and G1 (income tax concessions) are excluded from the calculation of WTO color because these programs are not included in the U.S. notification to the WTO. Source: USDA Economic Research Service.											

Table 3. Producer Support for OECD Countries, Categorized According to Production Impacts (2000) 1/

	Australia	Canada	EU	Iceland	Japan	Korea	Mexico	Norway	New Zealand	Poland	Switzerland	US	Total
	----- million U.S. dollars -----												
Market price support	0	1671	38225	49	10668	9478	639	2600	0	1000	2036	11009	77374
Fixed \$/unit of output -- amber	14	281	545	42	8	0	8	0	0	0	0	2513	3410
Fixed \$/unit of output -- blue	0	0	21,242	0	0	0	0	3,307	0	0	0	0	24,549
Deficiency payments -- amber	0	0	0	0	138	0	0	0	0	0	0	6,716	6,854
Deficiency payments -- blue	0	0	0	0	1,425	0	0	387	0	0	0	0	1,812
Capital input subsidies -- amber	27	100	522	2	0	158	0	368	0	138	89	0	1,405
Capital input subsidies -- green	0	0	1,007	0	1,537	14	271	0	0	0	0	0	2,829
Other input subsidies -- amber	140	378	2,369	2	0	87	50	0	4	62	6	1,296	4,394
Other input subsidies -- blue	0	0	567	0	0	0	0	26	0	0	0	0	592
Farm based payments -- amber	151	290	0	0	0	0	0	0	0	0	0	5,466	5,907
Farm based payments -- blue	0	0	0	0	0	0	0	0	0	0	0	0	0
Farm based payments -- green	0	210	2,190	0	0	165	938	68	0	0	580	5,314	9,466
Other minimal impacts -- green	137	389	1,658	2	221	10	118	722	0	27	782	4,702	8,769
<b>Total</b>	<b>468</b>	<b>3,319</b>	<b>68,326</b>	<b>98</b>	<b>13,997</b>	<b>9,911</b>	<b>2,024</b>	<b>7,478</b>	<b>4</b>	<b>1,227</b>	<b>3,493</b>	<b>37,017</b>	<b>147,361</b>
Total -- excluding MPS	468	1,648	30,101	49	3,329	434	1,385	4,878	4	227	1,457	26,008	69,987
Total -- amber type programs	332	2,720	41,661	95	10,813	9,722	697	2,969	4	1,200	2,130	27,000	99,344
Total -- amber type, excluding MPS	332	1,049	3,436	46	146	245	58	368	4	200	95	15,991	21,970
Total -- amber + blue type programs	332	2,720	63,470	95	12,239	9,722	697	6,688	4	1,200	2,130	27,000	126,297
Total -- amber + blue type, excluding MPS	332	1,049	25,245	46	1,571	245	58	4,087	4	200	95	15,991	48,923
<b>Value of production</b>	<b>9,764</b>	<b>15,211</b>	<b>146,170</b>	<b>104</b>	<b>44,249</b>	<b>14,645</b>	<b>15,556</b>	<b>6,447</b>	<b>945</b>	<b>7,810</b>	<b>3,432</b>	<b>135,799</b>	<b>400,132</b>

1/ Data reflect support to wheat, rice, coarse grains, oilseeds, sugar, milk, beef, sheep, pigmeat, chickens, EU horticulture, US peanuts, and US cotton. ERS calculations with OECD data.

Table 4. Producer Support for OECD Countries (2000), Categorized According to Commodity Level Support as a Percent of Value of Production

3-Apr-02

	Total	Wheat	Rice	Coarse grains (4 feeds)	Oilseeds	Refined sugar	Milk	Beef & sheep	Other meat (pigs, etc.)
Australia	3.4%	2.1%	1.1%	1.1%	1.1%	6.4%	4.1%	1.0%	0.9%
Canada	17.9%	5.9%		14.4%	7.2%		60.4%	2.9%	5.2%
European Union	28.5%	2.7%	-10.3%	5.8%	2.9%	49.2%	41.9%	62.0%	1.1%
with blue box	43.4%	67.7%	8.7%	61.5%	62.3%	49.6%	42.3%	96.4%	1.4%
Iceland	91.5%						158.6%	11.9%	84.9%
Japan	24.1%	84.2%	0.0%	83.3%	0.0%	40.2%	79.8%	27.8%	29.9%
with blue box	27.3%	84.2%	5.2%	83.3%	104.9%	40.2%	83.4%	27.8%	29.9%
Korea	66.4%		85.7%	82.8%	91.7%			69.4%	1.3%
Mexico	4.5%	0.2%	9.9%	17.7%	26.7%	50.6%	0.2%	0.2%	0.2%
Norway	46.0%	63.2%		60.2%			58.4%	32.2%	28.4%
with blue box	97.7%	63.5%		60.5%			137.0%	119.6%	35.7%
New Zealand	0.5%						0.3%	0.6%	1.2%
Poland	15.4%	16.1%		21.0%	4.8%	3.1%	5.2%	3.3%	24.8%
Switzerland	62.1%	54.0%		61.4%	60.3%	74.0%	67.5%	68.0%	45.9%
United States	19.9%	19.4%	44.9%	15.6%	22.2%	45.7%	49.5%	0.7%	0.0%
Total amber <sup>1/</sup>	24.8%	12.1%	26.5%	15.0%	18.6%	44.5%	45.5%	24.0%	5.6%
Total amber with blue box	31.4%	40.7%	30.2%	29.2%	28.1%	44.7%	48.7%	35.9%	5.8%

1/ Excludes blue box support.

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<sup>1</sup> Analyses of the commodity policies of the European Union are limited to those of the supranational entity with broad authority for making and carrying out agricultural policy. EU member countries, as sovereign nations, also have some responsibility for agricultural policy, but they are limited in the type of support that they may provide to agriculture. For the sake of simplicity, we refer to the EU as a “country.”

<sup>2</sup> Examples of farm based programs include the U.S. Production Flexibility Contracts and Market Loss Assistance Payments, the Canadian National Income Stabilization Accounts (NISA), Mexican PROCAMPO payments, and some green box programs in the EU and other western European countries, including landscape maintenance payments, environmental schemes, and disaster payments.

<sup>3</sup> This overstates domestic support relative that notified to the WTO. For example, our measures of domestic support includes U.S. support for programs such as crop insurance and irrigation subsidies that can be considered *de minimis* for reporting to the WTO. While these programs are considered amber they are left out of countries’ AMS notifications to the WTO.

<sup>4</sup> The estimates presented in this section should not be confused with countries actual domestic support notifications to the WTO. Our results differ from WTO notifications for two reasons. First, unless otherwise noted the results reported in this paper use the PSE concept for market price support rather than the WTO concept. Second, we do not exclude *de minimis* support.

<sup>5</sup> Only green box payments made directly to farmers are included in our measure, since these are the programs that are likely to impact production decisions and thus distort production and trade. Most countries report a wide variety of programs in the green box. For example, the U.S. reported almost \$50 billion in the green box in its 1998 notification, with about \$33.5 billion being domestic food aid.

<sup>6</sup> Canada’s NISA program is handled in similar manner.