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The WTO July 10th Agricultural Modalities Proposals and their Impact on Domestic Support in the EU and the US

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The purpose of this study is to assess the extent to which the disciplines proposed in the July 10 Agricultural Modalities draft (WTO, 2008) of the WTO Doha Development Agenda negotiations would impose real constraints on the trade distorting subsidies paid by the EU and the US. The intention is to improve the availability and quality of information about the implications of an agreement based on the draft modalities.

The paper begins with a detailed interpretation of the Draft Modalities for the components of domestic support in the EU and the US. The second section recalls the development of domestic notifications by the US and the EU to date, relative to current bindings; the likely development of those notifications over the next six years; and the compatibility of these projected notifications with proposed new bindings in the Doha Round. The third section of the paper discusses the extent to which the level of world prices impacts the relationship between WTO disciplines and domestic policies, and asks the question “how much would world prices have to fall from their current high levels in order to pose compatibility problems for the EU and the US in terms of their WTO obligations?” A fourth section looks at what changes in farm policy, in the ways in which policy instruments are notified, or in the operation of the instruments themselves might be made to bring the US and the EU into conformity. A brief concluding section is offered to sum up the significance of the results.

Section 1: Draft Modalities for Agriculture

The WTO Doha negotiations on agriculture are premised on the notion that the constraints introduced in the Uruguay Round on domestic agricultural policy and on trade policy in agricultural products, though useful in themselves, need to be strengthened if the trade system for these goods is to become fully responsive to the needs of the global

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marketplace. One aspect of this is the development of further disciplines on domestic support, in particular to encourage countries to move to less trade-disruptive instruments. Negotiations have made substantial progress in identifying improvements in the way in which domestic support must be constrained if it threatens to distort trade. Among the changes has been the introduction of a measure of the “overall trade distorting support” (OTDS) to complement the Aggregate Measure of Support (AMS) that had been defined and constrained in the Uruguay Round.² In addition, the AMS itself would be complemented by product specific AMS limits. The blue box, currently encompassing policies that are linked to supply control, would be expanded to embrace payments made on a fixed area and yield (or the equivalent for livestock) but that do not require supply control. Total blue box payments would also be limited for the first time, and product-specific blue box caps would be introduced. The amount of *de minimis* support that is excluded from notified support in the URAA would be reduced, and certain provisions in the green box would be modified.

These new provisions may or may not have a marked effect on the conduct of domestic farm policy in the US and the EU. If the level of actual payments is below the new caps, the effect is to reduce the flexibility of policy rather than to force change *per se*. That depends on the development of policy in relation to the new constraints and to changes in world market conditions. To assess whether there are likely to be “real” impacts on farm policy in the EU and the US is the primary motivation for this paper.

The Chairman of the negotiating committee for agriculture (Crawford Falconer) has issued periodic assessments of where a future agreement may lie, including the depth of cuts and the changes in the rules regarding domestic support (the “modalities” of an agreement). The latest draft “modalities” assessment was issued on July 10, 2008, for the continuation of intensive negotiations ahead of a meeting of several trade ministers on July 21. The hope is that agreement on the agricultural modalities can be reached in time for the Doha Round to be concluded by the end of 2008.

This section of the paper briefly summarizes the disciplines on domestic support included in the Chairman’s Draft of July 10. Unlike the rules introduced in the Uruguay Round Agreement on Agriculture, some of the disciplines are applied on a country-specific basis. This is manifest in two ways. Required reductions in the elements of domestic support are differentiated by “tiers” related to the existing URAA bound levels (in the case of the AMS) or new base period levels (in the case of the OTDS). As countries fall into specific categories on the basis of these measures, the reductions differ by country. Indeed the tiers were chosen specifically to include particular countries without the need to name them, a sensitive issue in a multilateral negotiation. However, the initial values and the reductions in the case of the disciplines on product specific AMS and blue box

² The base period OTDS is defined as the sum of the “final bound” total AMS from the Uruguay Round agreement, ten percent of the value of production in the 1995-2000 base period (to match the current product-specific and non product-specific *de minimis* amounts that are excluded from the total AMS), and the higher of the blue box support in the base period or five percent of the base period value of production.

support do indeed cross that line, with the US named in Paragraphs 23 and 42 for separate if parallel treatment. Moreover, in the case of the blue box limits, the latest Draft Modalities actually include an Annex specifically devoted to the US situation.

Reflecting this differing treatment, the main disciplines suggested in the Draft Modalities are shown in Tables 1a and 1b, for the US and the EU respectively.

The Falconer proposals would place a limit on overall trade-distorting support (OTDS) for the US and EU. The proposed reduction from the Base Level OTDS is higher for the EU than for the US. For the US the base period OTDS would comprise the final bound Total AMS from the URAA, ten percent of the 1995-2000 value of agricultural production (the current *de minimis* allowances), and an additional five percent of the value of production to accommodate future blue box payments (expected to be the price-based counter-cyclical payments introduced in the 2002 Farm Act).³ The only difference for the EU is that the Base OTDS would include actual average blue box payments in the base period, as they exceeded 5 percent of the value of agricultural production in that period.

The OTDS limit would be subject to a reduction of up to 73 percent over the implementation period of the agreement for the US, with an initial reduction of one third. The EU OTDS would also be reduced initially by one third and by up to 85 percent over the implementation period. There would also be a reduction of 60 percent in the bound Total AMS over the implementation period for the US and 70 percent for the EU. In both cases there would be an initial reduction of 25 percent. Product-specific limits would also be imposed on the AMS for the first time, binding these at base period levels. Reductions in the *de minimis* percentages (both product-specific and non product-specific) would be up to 60 percent from current allowances (i.e., reduced to a maximum percentage of 2.5 percent of the relevant production value). The blue box would have limits imposed for the first time, based on 2.5 percent of the value of production in the base period. In addition, there would be a limit on product-specific blue box support at the level in the base period for the EU and on the basis of a calculation linked to maximum payments under the 2002 Farm Act for the US.⁴ The cotton AMS would be reduced by a higher percentage (82 percent in the US and 84 percent in the EU) than for all commodities, and the cuts would take place more quickly. The implications of these changes for the US are shown in Table 2a and for the EU in Table 2b.

As indicated by Table 2a the US Base OTDS, from which reductions would be measured, would be \$48.2 billion. The Final Bound OTDS would be \$16.4 billion with a cut of 66 percent and \$13.0 billion with the 73 percent reduction. The Total AMS limit would fall

³ These are currently notified as non product-specific support by the United States.

⁴ The calculation is described in paragraph 42 of the draft modalities. The blue box limit for each commodity would be based on either 110 or 120 percent of the amount obtained by applying the share of the legislated maximum expenditure for each commodity to 2.5 percent of the total value of production during the 1995-2000 based period.

from \$19.1 billion to \$7.6 billion. The US would have a maximum blue box entitlement of roughly \$4.9 billion. There would be a base value of \$800 million dollars for the AMS for cotton.

The quantitative implications for the EU of these proposals are summarized in Table 2b. The Base OTDS, from which reductions would be measured, would be 110.3 billion euro. Thus the Final Bound OTDS would be 16.5 billion euro with an 85 percent cut and 27.6 billion euro if the cut were 75 percent. The AMS limit would appear to be reduced from the current level of 67.2 billion euro to 20.1 billion euro, but the precise number will have to take into account the implications of the enlargement of the EU. The Final Bound Total AMS for the EU-27 has not been agreed. A reasonable assumption is that it would be the sum of the Final Bound Total AMS for the EU-15 and those for the new members. Most of the twelve new members that have joined the EU since 1995 have themselves notified support under the URAA.⁵ The EU could simply add the AMS limits for the new members to its existing limit of 67.2 billion euro, increasing by 5.8 billion euro the Final Bound Total AMS for the EU-27, and this new total would be subject to the agreed cut.⁶ However, the size of the cut could lead to some contention. If the pre-membership status of the new members were considered in terms of the draft modalities they would fall in the lowest category of AMS countries, and thus only have to cut their Final Bound Total AMS by 45 percent. An aggregation of these amounts would give a higher Final Bound Total AMS than reported in the table.⁷ This would imply a slightly lower cut for the EU-27 than the full 70 percent.⁸

It is significant that the limit for the OTDS at the end of the transition period for the EU under the 85 percent cut is less than the AMS limit (a function of the higher percentage cut offsetting the higher base). This implies that the Total AMS will have to be reduced by even more than 70 percent in order to avoid violating the OTDS limit. To stay within the OTDS binding, the cut in the Final Bound Total AMS would have to be 75 percent for the EU. Moreover, if the full “available” AMS amount were to be used, there would in effect be no room for blue box and *de minimis* payments by the end of the transition

⁵ The ten new members that joined the EU in May 2004 were the Czech Republic, Estonia, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Slovenia and Slovakia. Romania and Bulgaria joined in 2007. Of these twelve new members, four countries (Estonia, Lithuania, Malta and Romania) have bound AMS ceilings at zero (Butault and Bureau, 2006). Poland, Hungary and the Czech Republic have significant AMS ceilings. Hungary is expected to be able to modify its own AMS ceiling to account for inflation before that amount is added to the EU limit.

⁶ The choice of exchange rate for countries who notifications are not in Euros could affect the final figure.

⁷ A similar qualification should be made in the case of the Base OTDS, as the Final Bound Total AMS is a component of that base level. If the Base OTDS for the EU-27 were calculated from the aggregate of the EU-15 and the Base OTDS for each of the twelve new members, a slightly different figure would result.

⁸ The agreement on a higher reduction on the product-specific AMS for cotton, which would result in a cut of 84 percent based on a general AMS cut of 70 percent, would marginally increase the average AMS cut.

period. Consequently, it is more likely that the AMS itself would be reduced even more in order not to “crowd out” some of the programs in these latter categories.

The Draft Modalities document is also specific as to the timeframe for the implementation of the new restrictions. This proposed phase-in is shown in Table 3a for the US and Table 3b for the EU.

For both the US and the EU, the OTDS limit would be cut by over one half by the end of the second year of the agreement, and by three-quarters in year four, if the higher reduction percentages are applied. The AMS limit would be cut in half by year three. The reductions are only slightly less dramatic if the lower reduction percentages are applied. For the US, the base period AMS for cotton of \$800 million would fall to \$143 million by the end of the second year (one third of the five year period for other products). The EU base period AMS for cotton of 565 million euro would fall to 194 million euro by the second year.

In addition to the constraints on total AMS and blue box support, the Revised Modalities Draft also proposes restrictions on product-specific AMS and blue box amounts. These constraints might well be binding in specific instances. The Revised Draft suggests caps on product-specific AMS payments at the 1995-2000 levels. The methods used to calculate these caps differ for the US and EU.

For the US, the proposed starting point for calculating the caps is the application of product specific AMS averages for 1995-2004 to the notified total product-specific (PS) average for 1995-2000 (paragraph 23). These are imposed in full on the first day of the implementation period, except for cases where the PS AMS in the two most recent notified years (2004-05) is higher (paragraph 24). In that case the limits are implemented with reductions in three equal installments with the starting point being the lower of the two-year average or 130 percent of the average calculated as above. There are specific qualifications for cases in which product-specific AMS amounts above *de minimis* levels have been introduced since the base period (1995-2000). In that case, the 2004-05 average can be used as a base (paragraph 25). In addition, if support for a commodity was below *de minimis* throughout the period 1995-2000, the *de minimis* value for that period can be used (paragraph 26). These rather complex conditions are very significant for the United States. Table 4a provides estimates of the product-specific AMS limits derived from applying these rules. The first column indicates which of the relevant conditions applies to each commodity.⁹

Overall, the application of the rules specified in the modalities preserves a considerable amount of “policy space” by setting product-specific AMS limits at historical levels for virtually all important and minor US agricultural commodities, even where the actual notified support for some of these has been very small in the past. As shown in the table,

⁹ In deriving some of these estimates it was necessary to supplement the information given in WTO notifications by other data, particularly on production values. The lack of data in a few cases required that assumptions be employed. As a result the numbers in Table 4a should be viewed as preliminary estimates.

there is only one commodity for which support has been notified by the US that would not be eligible for AMS payments in the future. This product is avocados for which a small amount of trade adjustment assistance payments was notified in 2005 but does not qualify as establishing an AMS base. Nevertheless, as indicated by the final column of the table these limits could prove to be binding depending on market conditions. The actual notified AMS in 2005 (the last year for which notifications have been provided by the US) was higher than the year 3 binding for several commodities (barley, chickpeas, corn, cotton, dairy, dry peas, lentils, and sorghum). Also the total notified AMS for 2005, while high by historical standards, was roughly 10-20 percent lower than the notified AMS during the commodity price slump of 1999-2001.

The situation in the case of cotton is particularly noteworthy. If the special conditions applying to cotton in the modalities are implemented, the cap applying to that commodity would be substantially reduced. A base value that would otherwise be roughly \$1.5 billion is cut to \$600 million in the first year of the implementation period, and then to the final bound value of just under \$143 million by the second year. That figure may be compared to the actual notified AMS for cotton in 2005 of over \$1.6 billion.

One interesting aspect of product-specific caps is that, if the methodology specified in the modalities is applied strictly, some commodities could be covered by more than one AMS limit. One important case concerns subsidy limits on livestock and on cattle and calves. The US has notified payments on both of these product categories in the past, so there may be some flexibility in future notification decisions.¹⁰ A second case concerns support for “orchards and vineyards” and its relationship to support for individual commodities, such as apples and grapes, which have also been notified separately.

The potential for this ambiguity arises because of variations in notifications from year to year. It may have been difficult to apportion the support provided to a category of products (such as orchard and vineyard crops) to individual products in a particular year, even though notifications had been provided for those products in other years. However, the fact that commodity definitions have not been applied in a consistent manner in the notifications (presumably this was not challenged by other countries) and the US tendency to change support programs over time appears to have opened up the possibility for the United States to create some additional “policy space” in the AMS caps.

Table 4b shows the implications of product-specific limits on the AMS for the EU for 23 commodities where the base AMS was above 200 million euro (the full table showing all the AMS limits is attached as an Annex). The requirement that the 1995-2000 base period should not be exceeded clearly puts constraints on policy change. The table shows these constraints relative to the 2003/04 notified levels. In eight of the 23 products, the most

¹⁰ It is not entirely apparent what payments were included in the “livestock” category. Historical value of production data from the National Agricultural Statistics Service does not match exactly the value of production data for the livestock category notified to the WTO, although data for cattle and calves (which has also been notified – although with zero support values) from the two sources are of a similar magnitude.

recent notification exceeds the proposed base. These include skimmed milk powder and butter, whose administered prices have been cut since that notification, and tobacco, bananas and cotton that have also undergone policy reforms since 2003/04. This leaves apples and cucumbers, as well as dried fodder.¹¹ Reform of fresh fruit and vegetables markets has not removed price supports thus far, though these are administered through producer organizations. It is likely that payments through these organizations will not be fully reported as AMS, as they are intended for market development as well as for income support. This would cut the AMS notifications.

The significance of product-specific AMS constraints in the case of the EU is somewhat diluted by the ease with which those constraints could be weakened by notification changes. Though increases in administered prices are effectively restricted, the eligible quantities may be reported in a different way.¹² Variations in the level of “eligible production” for both the products where the market price support is calculated and for those where an equivalent measure of support is used could well be used to avoid the violation of AMS limits.¹³

Blue box limits at a product specific level are also likely to have some impact. The proposed approach to derive these limits differs between the US and the EU. The US limits are based upon the maximum potential expenditure (“legislated maximum payments”) on counter-cyclical payments (CCPs) under the 2002 Farm Act. The draft modalities include a year-by-year calculation of these amounts and the average for 2002-07 (see Table 5a).¹⁴ The summary table in the WTO draft modalities paper does not take into account an additional restriction on blue box cotton payments; the numbers in Table 5a reflect that restriction.

The lower total of the blue box cap (using 110 percent of the amount calculated from the application of the proportional maximum CCPs to 2.5 percent of the value of production) would permit an expenditure on CCPs equivalent to roughly 61 percent of legislated maximum payments under the 2002 Farm Act. The higher limit (120 percent) would

¹¹ The dried fodder program is also undergoing changes that could reduce the AMS reported for this commodity (see Josling and Swinbank, 2008).

¹² Changes in fixed reference prices are not envisaged in the URAA, and have not been a part of the Doha Round discussions. If the EU wished to change them unilaterally, this would presumably have to be negotiated with affected suppliers. However, if the reference prices were to stay well below actual world prices for several years, there is a possibility that the EU could argue for an updating so as not to keep reporting subsidies where none exist.

¹³ The potential switching of payments between overlapping categories does not seem to be an issue for the EU. In almost all cases, notified commodity categories are mutually exclusive.

¹⁴ The calculations exclude some minor oilseeds (such as canola and sunflower) that were also eligible for such payments. However, these only accounted for roughly 0.2 percent of the legislated maximum payments for 2002-07. It is unclear whether the numbers in the draft modalities will be the ones that would be finally adopted, but if so it would appear that CCPs provided for minor oilseeds would have to be notified as non product-specific AMS, as in earlier notifications.

allow 66 percent of the maximum payments under the 2002 law to be made. The maximum permitted expenditure under the blue box would be \$4,835 million (see Table 2a). This implies that it would only be possible to use the full “allowance” provided by the individual blue box caps under the lower binding (110 percent). If the binding were at 120 percent of the calculated amount, the absolute limit on blue box spending would in effect constrain individual blue box expenditures.

Product-specific limits in the case of the EU are grouped by payment programs broadly linked to individual products but with less precision than for AMS limits. Table 5b shows the relationship between the blue box limit (the average of the 1995-2000 amounts) and the notification for 2003/04. Blue box spending has increased significantly between the base period and the latest notification, leading to the impression that the constraint will be onerous. The average level of blue box payments in the base period was 20.9 billion euro, and the 2003/04 notification identified 24.8 billion euro as paid under blue box programs. But the effect of the 2003 reforms (the introduction of the single farm payment system) has been to remove much of the spending previously classified as blue to the green box.

Though the total blue box spending may be decreasing, as payments move to the green box, the significance of the product-specific limits is that subsidies for individual programs cannot be increased to make use of that “slack”. Moreover, for any payments that are currently tied to fixed yield, areas and head of livestock, the restriction implies that there is no possibility of any re-basing that would violate the limits.

The draft modalities include a provision that allows countries to shift allowable support from AMS support (thus lowering the product-specific AMS binding) to the blue box (and hence increasing allowable blue box subsidies). The notion is that such a shift is in the direction of reducing the most trade-distorting types of support: without this provision, countries may not have the ability to switch from AMS to blue box payments.

This is particularly important for the US, where the new definition of the blue box allows for the notification of CCPs in that category. Table 6 analyzes the feasibility for the US of doing this in order to increase the product-specific bindings for each commodity to the legislated maximum payments allowed under the 2002 Farm Act. The calculations show that this type of box-shifting could allow payments to be made up to the legislated maxima for all commodities except cotton and wheat. For those commodities the AMS binding is too low to be able to achieve the desired result. However, it should be borne in mind that the sum of the individual product bindings is below the total blue box cap only with the 110 percent figure. That yields a total of \$4,666 million in potential blue box payments, compared to a total blue box cap of \$4,835. Consequently, there is only limited scope for box-shifting for individual commodities while staying within the overall blue box constraint.

Despite this, the switch from AMS to blue box payments might be possible in the US for cotton. Suppose, for example, that the US could allocate all its available blue box (under the 110 percent condition) to cotton. If that were possible the blue box binding would rise by 46 percent (from \$336 million to \$505 million). That would require a \$338 million

reduction in the cotton AMS. However, if the reduction has to be applied to the final cotton AMS of \$143 million (Table 4a) this would not be feasible. The maximum increase possible in the blue box limit would be roughly \$72 million ($\$143 \text{ million}/2$). If, on the other hand, the US chose to increase the blue box limit on wheat (the other commodity for which it is not possible to achieve the full increase to the legislated maximum) a maximum of \$231 million could be shifted from the AMS to the blue box cap. That would yield a cap of roughly \$1,272 million or roughly 90 percent of the legislated maximum expenditure on CCPs.

For the EU, with a general move of subsidies from the AMS to the blue box in the 1990s and more recently a move from blue box to green box payments, the shift of subsidies from AMS to the blue box is unlikely to be of any importance. However, there could be some individual products where such flexibility could be useful.

Section 2: Updated Notification of Domestic Support

To put into perspective the significance of the new disciplines on domestic support it is necessary to update the current level of support notified to the WTO by the US and the EU. Though the notifications themselves are not up-to-date (the latest US notification of domestic support is for the 2005 calendar year and that for the EU covers the 2003/04 crop year) it is possible to use available official data to derive reasonable estimates of notifications for more recent years. Such “shadow notifications” have been constructed as part of a study by IFPRI that covers several countries. Preliminary US results are reported in Blandford and Orden (2008) and results for the EU in Josling and Swinbank (2008). The estimates reported in this paper contain significant updates for the earlier US estimates for 2006 and minor updates for the EU.

US and EU notifications indicate the changing balance between the boxes. Figures 1a and 1b show the composition of the Domestic Support in the US and the EU since 1995, including both the official notifications and also the shadow notifications constructed by the authors using available official data.

The first year of US notifications covered the last year of the 1990 Farm Act. The US still had deficiency payments with acreage idling provisions and this is reflected in the blue box component of the notification. Crop prices were relatively high and so the notified total AMS and *de minimis* were both small. With the passage of the 1996 Farm Act, direct income support payments were introduced to replace the deficiency payments: the direct payments were notified in the green box. AMS support remained low until crop prices started to deteriorate in 1998. From that time until the passage of the 2002 Act, production-linked “emergency” payments were authorized that increased AMS support and its share of total support. During the life of the 2002 Act AMS support has generally remained high and variable. More recently, strengthening commodity prices have led to a

significant estimated reduction in the total AMS (in 2006, for example) – a condition that has continued into 2008.¹⁵

The first notification of domestic support by the EU, in 1995/96, coincided with the final years of the implementation of the MacSharry reforms.¹⁶ The last EU notification of domestic support covers the 2003/04 marketing year. Figure 1b shows the notifications from 1995/6 to 2003/04 but includes also a “shadow” calculation of the three years subsequent to the last official notification. The 1995/96 notification encompasses the changes in the instrumentation of the CAP that were the central aspect of the MacSharry reforms. Direct payments (area payments on cereals and oilseeds, and headage payments on beef and sheep) were placed in the blue box, since they were associated with limits on production. As a result, the original notifications, from the 1995/96 marketing year included a large AMS component (48 billion euro), a smaller but sizable blue box element (21 billion euro) and a relatively modest amount of green box payments (19 billion euro).¹⁷

The nature of the CAP reforms since 1995 is reflected in the notifications to the WTO. The change in policy shows up through a major shift in the pattern of notifications for the categories of domestic support. Support prices have been reduced for most of the major products, to close somewhat the gap between EU prices and those in world markets. Export subsidies have also been reduced, in part as a result of the WTO constraints.

The “new” CAP, starting with the 1992 MacSharry reforms, places heavy reliance on direct payments to farmers based on past production patterns and broadly unrelated to current prices and output decisions. Thus the nine notifications from 1995/96 to 2003/04 show a marked reduction in price supports compensated by an increase in direct payments. Current Total AMS payments fell from around 50 billion euro in 1995/96 to 30 billion euro in 2003/04, a 40 percent decline. Blue box payments rose over the period, from 20 billion to 25 billion euro, and green box payments rose from 18 billion to 22 billion euro.¹⁸

The mix of policies in the EU changed relatively little from 1995 to 2000, as reforms in the cereal and oilseed sectors were being assimilated. But budgetary pressures and the

¹⁵ Note also the significant increase in green box support in the US, due primarily to a major expansion in expenditures on domestic food assistance programs.

¹⁶ Compensation payments were introduced progressively in the marketing years 1993/94 – 1995/96.

¹⁷ It is likely that, in the eight years between the 1986-88 base and the first year of the URAA, trade-distorting support (as measured by the AMS) fell from roughly 80 billion to 50 billion euro. This was due in large part to the introduction of the MacSharry reforms and the placing of these payments in the blue box. Green box eligible policies probably rose modestly over the same period.

¹⁸ Though this might appear to suggest that about 10 billion euro in less trade-distorting support has replaced 20 billion euro of more trade-disruptive payments, it should be remembered that much of the AMS is a calculation based on the difference between an administered price and a fixed reference price. So a drop in calculated support may not be directly reflected in either actual government payments or farm income.

prospect of ten new members from eastern and central Europe led the EU to consider further reforms. These were incorporated in the so-called Agenda 2000 reforms that were agreed in 1999. These reforms had a noticeable impact on EU domestic support notifications, maintaining and strengthening the direction of the 1992 reforms. Intervention prices were reduced by 29 percent for cereals (including a more substantial cut for rice) and, from 2005, they were reduced by 15 percent for butter and for skimmed milk powder, reducing the gap between these “administered” prices and the fixed reference prices used in support calculations.¹⁹ The AMS fell from 48 billion euro in 1999/2000 to 28 billion euro in 2002/2003. Changes in the beef regime also modified the notifications somewhat: a slaughter premium and some supplementary payments were added to existing subsidies for suckler cows and the special beef premium. These new payments were notified as blue box as they were limited to base levels of livestock numbers. Blue box payments increased by 5 billion euros over the period.

Even more significant for the EU’s domestic support notification are reforms enacted since 2002/2003, notably the 2003 Fischler Reforms, the changes in the regime for the Mediterranean crops in 2004, the reform of the sugar policy in 2005, and the reform of the fresh and processed fruit and vegetable policies in 2007. The introduction of the Single Farm Payment, the key ingredient of the 2003 Reform further separates payments from current production. The 2004/05 notification of domestic support will include some of these decoupled payments under the Fischler reforms, those that were made in 2004, but the main impact will be on the notifications from 2005/06 to 2009/2010, by which time most of the policy changes should have been implemented.

The nature of the direct payments has also undergone changes, with the relaxation of obligations to continue to produce specific products as a condition of eligibility. The Agenda 2000 reforms consolidated payments for cereals and oilseeds, and the Single Farm Payment system incorporates subsidies for most other producers in the same scheme. This again will be reflected in notifications: many blue box payments become eligible for the green box as they are no longer linked to production. The shadow notifications used in this document reflect this shift.

Figure 1a indicates that AMS support in the US can be highly variable depending on market prices. As discussed below, this could pose some significant challenges for the US in meeting future commitments under a DDA Agreement. Figure 1b indicates that the level and composition of AMS support in the EU has also varied over time, but much of the variation has been due to systemic changes in policy.

The Uruguay Round Agreement included bindings on the level of the most trade-distorting domestic support, as included in the Total AMS. The Current Total AMS was not to exceed the Final Bound AMS level after the transition period. Figures 2a and 2b

¹⁹ The Agenda 2000 package also agreed a new dairy premium from 2005, to compensate dairy farmers for scheduled reductions in butter and skim milk powder intervention prices. In WTO (1999) the EU indicated its intention to declare this as a blue box payment.

show the Current Total AMS and the Final Bound AMS for both the US and the EU. Support was comfortably within the bindings in both cases, although the pronounced variability of notified support by the United States is apparent. As discussed in Blandford and Orden (2008) support would probably have exceeded the binding if direct payments (notified as green box) and counter-cyclical payments (notified as non product-specific AMS) had been included in the PS AMS. The possibility that this may be required in the future is raised in an ongoing WTO dispute-settlement case brought by Brazil and others, but the detailed impact of such a change is not assessed in this paper.

Projected Notifications in the Absence of a Doha Round

A projection of the notifications of domestic support that might be expected to prevail in the absence of the DDA has been made using a spreadsheet-based “domestic support simulator” developed by the authors for a previous project for the World Bank and used in the IFPRI project referred to above. The projections reported here are based on constructed assumptions with elements common to both the US and the EU. The starting point for the assumptions is the prices, yields and other exogenous variables used in the “shadow notifications” shown above. The “domestic support simulator” spreadsheets have been used to generate the projected notifications for the period 2007-2014. Policies in the US are those incorporated in the 2008 Farm Act (assumed to be continued through 2014) and the assumption for the EU is that there would be no major policy shifts beyond the Health Check (2008) proposals. These projections are shown in Figures 3a and 3b, as extensions of the historical series of official notifications and the shadow notification “updates” using actual data.

Under the 2008 Farm Act expenditures on domestic food assistance programs and environmental programs are anticipated to increase. Estimates of these increases plus other green box items, such as expenditures on general services, are reflected in Figure 3a. On the basis of our assumptions US green box support is projected to rise by over 25 percent – from \$73 billion in 2006 to \$93 billion by 2014. On the other hand the current Total AMS is projected to decline from an estimated \$7.6 billion in 2006 to \$4.3 billion in 2013. Our projections of prices and production for the US are based primarily on those published by the USDA. In the most recent USDA baseline (to 2017) relatively high commodity prices are foreseen (although not as high as those actually observed in 2008). As a result, price-related support falls.

The Farm Act introduces an optional crop revenue stabilization program called ACRE. The detailed rules for this program have still to be published but it appears that this program could trigger significant payments, even when crop prices are relatively high. The possibility that such payments could be triggered in the future, if enough producers sign up, is not reflected in the projections in Figure 3a but is fully discussed in the next section of this paper.

Our projections for the EU suggest a continued switch in the composition of support as a result of ongoing changes in the CAP. Further decoupling will lead to a decline in blue

box support and a corresponding increase in the green box. Green box support increases from an estimated 22 billion euro in 2004/5 to 47 billion euro in 2013/14. The Total AMS stabilizes at around 24 billion euros, compared to an estimated 33 billion in 2004/5.

Projections with Doha Limits

Using the domestic support simulator a projection is made of the domestic support notifications that might be expected assuming that the modalities in the July 10, 2008 draft are accepted in full and implemented over the period 2009 to 2014 (in effect from the crop year 2009/2010 to the crop year 2013/2014 for the major crop support programs, and the calendar years 2010 to 2014 for other subsidies). The assumption is made that there will be no significant domestic policy changes over this period other than those indicated above. Estimated notifications can then be compared to the constraints (both general and product-specific) that would be implied by the DDA. Any instances of conflict between the projected notifications and the constraints would presumably trigger either policy change or modifications in the notifications as allowed by the modalities. Figures 4a and 4b show the proposed limits and projected values for the OTDS, the Total AMS and the blue box for the US and EU, respectively.

The US is projected to stay comfortably within its total bindings for the duration of the projection period. In addition to the relatively high crop prices projected by USDA an important contributing factor to this result is a change in dairy policy included in the 2008 Farm Act. Prior to that Act the U.S. dairy support program was defined with respect to a support price for milk. That structure was reflected in US notifications in that the per unit market price support calculation was applied to total milk production. The 2008 Act redefines the support program with respect to support for three dairy products – butter, cheddar cheese and non-fat dry milk.²⁰ Those support prices are defined to be consistent with the previous support price for milk (\$9.90 per hundredweight). The effect of this change is to allow the United States to notify market price support for dairy on the basis of the volume of the three dairy products concerned, rather than the total volume of milk production. We build this change in notifications into our projections beginning in 2008. There remain some technical questions associated with how the calculation would be made, but our estimate is that the change in methodology would reduce notified market price support for dairy by roughly 65 percent. The application of the revised approach results in a projected notification of \$1.9 billion in 2014, compared to \$5.5 billion under the previous method. If it were not for this change, we project that the US would exceed its Total AMS binding in 2014 by roughly \$0.2 billion, rather than being \$3.4 billion below the binding.

²⁰ Economists would argue that a price support program for a subset of dairy products is likely to affect the prices of all dairy products, i.e., that the originally formulation of the notifications is still appropriate in an economic, if not a legal sense.

As noted earlier, the estimated Current Total AMS for the EU for the year 2013/14 is 23.3 billion euro. As Figure 4b shows, the reduced AMS binding would imply a significant restraint on EU policies in the final year of the transition period if these policies continue on their current course. Thus the more restrictive AMS limit (85 percent reduction) would appear to bind and impose further policy changes of a nature consistent with developments since 2003. The year 2013/14 is the start of a new budgetary cycle in the EU, at which time the funding for the CAP could well be trimmed for fiscal reasons.

Although the overall bindings relative to aggregate support would seem to suggest few problems for the United States, there are issues with some commodities (Figure 5). Our projections suggest that the draft modalities would result in product-specific AMS and blue box bindings being exceeded for cotton throughout the implementation period of an agreement, with an excess for peanut blue box payments (CCPs) and for AMS support for sugar. As noted above the change in the dairy program removes a potential problem of exceeding the PS AMS binding for dairy. These results indicate that there are likely to be significant issues to be faced for a limited number of commodities, two of which (cotton and sugar) have proved to be highly politically sensitive in the United States.

The EU has somewhat less product-specific problems in meeting AMS and blue box constraints as a result of significant product-by-product reforms over the past fifteen years. Cotton and sugar policies have both been changed significantly in recent years, making the AMS constraint less intrusive. Products such as beef that are subject to cyclical market conditions could be impacted by restraints that reduce the ability of the EU to respond to market collapse.

Section 3: Sensitivity of Support Levels to Exogenous Shocks

This section of the paper will explore the extent to which the estimates given in the previous section are dependent on world prices. Specifically, the issue is whether the high prices of the past eighteen months, which have now been built into the “official” projected market outlook for the US and the EU, at least to some extent, are the cause of the outcome described in the previous section of little direct impact of the total bindings on farm policies until the end of the transition period. If the relatively benign results, from the viewpoint of domestic producers, are robust in the face of significant price declines, then the implication is that the agreement poses a minimal threat to the incomes of farmers in the US and the EU. If, by contrast, the US or the EU were to be effectively constrained from reacting (using current policy instruments) to the impact of a major price decline, then the message is different. For those that seek “real” reductions in the level of domestic support this could be an agreeable outcome; for those concerned with keeping income supports in place such a situation would be unwelcome.

As noted above, US support notifications can be affected dramatically by fluctuations in prices. Consequently, we calculate the change in price that would have a significant impact on the Current Total AMS and the blue box (where appropriate) using the US domestic support simulator. The chance that such price changes may occur in the next

few years is not in itself calculated. The outcomes are compared to the limits implied by the current proposals.

First, we explore what reductions would be necessary in projected market prices to trigger support expenditures in excess of bound AMS and blue box levels for several key commodities. Table 7 shows the average percentage reduction in market prices for the period 2009-2014 that would trigger notifications in excess of the AMS and blue box caps. The smallest price declines that would trigger excess support are in the market for wheat: a reduction of roughly 30 percent in the average market price during the implementation period would trigger an excess over the blue box cap, and a 40 percent fall would trigger an excess over the AMS cap. The corn and soybean price declines would have to be somewhat higher: 40-42 percent price reductions would be needed to trigger an excess over the blue box cap, and 47-48 percent price reductions would be needed to violate the AMS cap. The figures in the table suggest that price reductions are most likely to trigger blue box cap excesses before those for the AMS.

There is, however, a complicating factor that must be taken into account in this calculation. As indicated above, under the 2008 Farm Act producers will have the option of enrolling in a revenue stabilization program (ACRE). If they do so, they will experience a reduction in the amount of direct payments that they receive (the payment rate is unchanged but the percentage of base acres on which payments will be based will be reduced from 85 percent to 83.3 percent). They will also face a 30 percent reduction in the loan rate. They will also lose their eligibility for CCPs. In exchange, they will be eligible for revenue stabilization payments calculated on a crop-specific basis.

It is difficult to estimate precisely the impact of this program: the rules governing the program have yet to be written. A key unknown is how many producers will choose to enroll and consequently which products and what proportion of production will be affected. It has been suggested that the program will be most attractive to corn/soybean producers and that they are the most likely to enroll, but this is a function of market expectations. Reduced eligibility for existing counter-cyclical payments would ease the pressure on blue box caps if prices fall by the amounts indicated in Table 7, and on the AMS components that are associated with price support (loan deficiency payments, for example). But, since ACRE payments could be triggered when market prices are relatively high, this could put pressure on product-specific AMS caps even at relatively high price levels.

Analysis of the Implications of the ACRE program

To look more closely at the implications of price developments on the US AMS, we turn to a more detailed calculation of the new ACRE program. We examine the impact of variations in prices for three key commodities: corn, soybeans and wheat. These commodities are chosen because of their importance for U.S. notifications and because they are likely to be most affected by the ACRE program. Price patterns for the commodities were derived from three historical periods when price volatility was evident (1974-1980; 1980-1986 and 1995-2001). These patterns were applied to the base data in

the current projections to give a “scenario” similar to the three historical periods.²¹ Each of these periods (for convenience we refer to them as the 1970s, the 1980s and the 1990s price patterns) was characterized by relatively high commodity prices in an initial year in each of the markets – similar to the recent situation. As is usual in projections based on trends, there is very limited variability in the prices of commodities in the official baseline that we used for the projected notifications. Table 8 summarizes the average price variation (average absolute percentage year-to-year changes) for the three commodities in the baseline and for the three price pattern scenarios. The variability is substantially higher in all cases than in the baseline projections, and is more consistent with historical variation observed since the beginning of the 1960s (final column of the table).

Though it is unclear how many farmers will sign up for the ACRE program, expectations of market prices substantially in excess of loan rates seem likely to create an incentive for many to do so. In our analysis we assume a 90 percent “sign up rate” (reflected in terms of 90 percent of annual production for each of the eligible commodities).²² The baseline production numbers are not altered for the simulations: it is difficult to relate variations in national production to payments at the farm or state levels, so no attempt was made to do this. Our aim is to examine how price variation alone could affect U.S. notified support under the new program. Actual payouts could be higher or lower than estimated here as a result of production variations.

A further issue to be considered in evaluating the impact of the program is how it would be notified to the WTO. The counter-cyclical payment program introduced under the 2002 Farm Act was notified to the WTO under the non product-specific AMS. That program makes payments to farmers when prices fall below a target level. Payments are linked to a fixed base area and do not vary with current production; as noted earlier they would be moved into the blue box under the terms of the draft modalities for agriculture. Payments under the ACRE program, in contrast, are linked to current yields for individual crops at the level of individual farms. It appears that the payments would not qualify for the existing or expanded blue box, and unlikely that they would qualify under the non product-specific category, due to the product-specific linkage to current production. They seem to qualify for notification as product-specific AMS. We make this assumption in our analysis. This is likely to have significant implications for the ability of

²¹ Percentage year-to-year changes in nominal average U.S. farm prices were computed from NASS/USDA data. These percentages were then applied to the baseline prices used in the projections. Consequently, projected market prices in 2009 are computed as the USDA baseline price for 2008 multiplied by the percentage change from 1974 to 1975 and so on through to 2014. For the other scenarios the changes from 1980 to 1981 and 1995 to 1996 provide the starting values. Use of these averages avoids the introduction of initial commodity price spikes, for example in 1973-74, in order to avoid the introduction of excessive variation in the simulations, but reflects periods in which commodity prices are initially quite high.

²² Actual sign up is in terms of farms. The share of production used here reflects an assumption that major producers of the three crops will elect to enroll. Such an assumption was used by the Bush administration in its critical analysis of the program during the debate on the Farm Bill.

the United States to meet future WTO commitments under a Doha agreement, particularly its commitments on product-specific AMS.

Figures 7-9 summarize the principal results of simulations of the draft modalities when ACRE is included from 2009 onwards, using the pattern of prices for the three price periods. In the base simulation, without ACRE, none of the three commodities was projected to exceed its PS AMS limit. For the 18 cases (total of years under each of the three scenarios) the PS binding for corn was exceeded 12 times; the wheat binding was exceeded 9 times; and the soybean binding was exceeded four times. Particularly sharp declines in prices, such as occurred for corn between 1985 and 1986, when the market price fell by over 30 percent, could trigger major increases in payments under ACRE. This could result in a substantial increase in notified support.

ACRE payments could actually result in the total AMS commitment, and even the OTDS commitment being exceeded, if price swings are dramatic. Under the 18 cases analyzed, an excess of the notified current total AMS over the binding occurs on five occasions (three of these under the price pattern seen in the 1980s) and the OTDS limit is exceeded on two occasions, again for the 1980s price developments. It may be recalled that the 1980s was a period in which there was considerable monetary instability with significant shifts in the value of the dollar. It is possible that the current commodity boom could see a return to such conditions, particularly if inflationary pressures increase.

Though we make no attempt to predict the future pattern of prices, it seems likely that these will be more variable than assumed in the USDA baseline, and that this will open up the possibility that, under the 2008 farm Act, the United States may exceed the tighter restrictions on domestic support adopted under a Doha agreement in certain years as a result of the ACRE program.

Unlike the US, where this is clearly an important issue, the impact of world price declines on EU notifications is not so noticeable. The way in which the AMS is constructed insulates it from changes in world prices. The reference prices are fixed and the administered prices would certainly not increase enough to make the AMS rise sharply. Administered prices could possibly rise in the future, and that is more likely to happen if world prices stayed high. In those circumstances the increase in the AMS would be due to high rather than low prices. In practice, administered prices for such products as fresh fruits and vegetables are unlikely to rise, as the trend is to reorient producers to export markets. For grains, the increase in the intervention price could raise the AMS, but the tendency has been strongly towards reducing intervention. And in high price periods the need to intervene would be much less.

Prices of many agricultural goods are expressed and traded in US dollars. So the question arises as to what would happen in the EU if the dollar were to reverse recent trends and become stronger relative to the euro. EU exports would benefit from the strengthening of the currency of a major competitor, but prices on the domestic market could rise. However, this would give the CAP even more freedom to dismantle the price support elements that remain. The direct payments would presumably be affected only indirectly.

One result of such a strengthening of the dollar relative to the euro would be to reduce the amount of protection given to EU farmers when expressed in dollars. If the dollar recovered its position of strength, rising to parity with the euro by 2013/14, the Current Total AMS of the EU expressed in US dollars would almost halve over the next few years, approaching \$20 billion (relative to \$36 billion if the euro retains its recent strength). This gives an indication of the significance of exchange rates in making international comparisons of support levels.

Section 4: Responses to WTO Constraints

This section assesses the extent to which adjustments might have to be made to keep within agreed WTO limits on domestic support. These adjustments can be grouped under two headings:

- Changes in notifications that have no or minimal impact of domestic producers (and consumers) and hence will not reduce trade-distorting support to an appreciable extent. These changes may be **cosmetic** “box-shifting” in the notifications themselves, through the modification of the scope of administered prices, the use of smaller quantities of “eligible production”, etc.
- Changes in policy that would change notifications to bring them into line but also have an impact on incentives for domestic producers. These changes can include **trade-friendly** box-shifting, reduction of policy prices, limits on support payments, etc.

The United States has already prepared the ground for reductions in notified domestic support through the changes made in the 2008 Farm Act to the definition of the dairy support program. Only three dairy products are actually subject to support purchases – butter, cheddar cheese, and non-fat dry milk. Deriving an estimate of market price support on the basis of the production of these commodities and their support prices reduces notified support significantly. Further changes in the US dairy market in the future – in particular more rapid growth in the production of products other than those that are supported could lead to a widening of the gap between support calculated using the two approaches. This box-shifting has no practical policy effect, except to avoid the possibility that the support price for milk would have had to be reduced in order to meet future WTO commitments.

Are there other possibilities for making changes in US notifications to change the apparent size or composition of support? The IFPRI project on support notifications revealed that countries use significantly different approaches to estimating similar types of support. Beyond the legal issues involved (i.e., the status of notifications in the context of the WTO) there are some important conceptual issues. For example, some countries appear to notify an AMS for price support only when actual government purchases are made, and then only by computing the value of support on the basis of actual purchases

multiplied by a price gap.²³ From an economic perspective it could be argued that once purchases are triggered the price for the entire production of the commodity concerned is affected and consequently the notified AMS should be computed as such. But what if there are no government purchases? In the U.S. dairy case, for example, domestic market prices for milk and dairy products have been well above price support levels in recent years and it could therefore be argued that the support program has no impact on domestic prices, i.e., the AMS should be zero. However, by doing this the support estimates would ignore the potential impact of trade barriers on domestic prices, when these are above world market prices.

The implication of such differences seems to be that in the absence of more effective monitoring of notifications it might be possible for the United States (and other countries) to change the methods used to calculate particular components of support. For example, the application of a purchase methodology to the calculation of sugar price support in the United States would virtually eliminate the sugar AMS. But it is not clear that the United States would attempt to do this.²⁴ Opening up the methodology of support calculations to detailed scrutiny could be like opening Pandora's box – with potential implications for many countries. The current WTO notifications case brought by Brazil and Canada (the so-called TAMS case) could be the start of such a closer examination of methods, but it is not easy to predict where such a process might lead.

In terms of other possibilities for box-shifting the projections for U.S. notified support suggest that the greatest potential for the United States lies in an expansion of the non product-specific support category. Figure 10 summarizes the projections for 2014 in terms of the components of domestic support. With a projected payments equal to \$6.9 billion of the “available” \$13 billion OTDS, the United States would still have \$6.1 billion in non product-specific support that could be used, while still staying within WTO commitments. The exact amount could change depending on what happens to PS AMS and blue box payments under the ACRE program in the 2008 Farm Act, but some shifting of support into the non product-specific category would appear to be a possibility for the United States. Given the considerable pressure that was exerted for a reduction in direct payments (green box), in the debate on the 2008 Farm Bill, the popularity of such payments among farmers might well decline in the future with less support for box-shifting in that direction.

²³ There is also the complicating factor of re-defining the objective of government purchases in order to change the notifications. This applied to Japanese rice. Redefinition of the rice program as a food security program (rather than a price support program) resulted in a 75 percent reduction in Japan's notified AMS between 1997 and 1998.

²⁴ For sugar, there is also the issue of a shift in support towards ethanol production. Under the current Farm Act, purchases of surplus sugar are to be sold to bioenergy producers, opening up the possibility of a reclassification of support. The definition of what constitutes an “agricultural” subsidy is an important issue that is discussed further in the concluding section.

The lack of any similar “policy space” for the EU is illustrated in Figure 11. The flexibility that will remain for “box-shifting” to accommodate non-green support measures rapidly shrinks after 2011/12 if the DDA modalities are adopted. In 2011/12 the EU would have 36.2 billion euro to expend on AMS policies without breaking the OTDS constraint, though the effective ceiling would be the AMS limit of 32.2 billion euro. Both these constraints are well above the projected level of AMS, estimated at 22 billion euro. By the next year, the OTDS limit will have been reduced to where only 24.9 billion would be available for AMS expenditure, a more effective constraint than the AMS limit of 26.2 billion euro for that year. By 2013/14, as shown in the figure, the OTDS constraint would impose a limit of 13.5 billion euro on the EU AMS, removing any “slack” and implying that the projected AMS of 21.9 billion would itself violate the OTDS constraint by 8.5 billion euro. So the constraint will bite suddenly at the end of the transition period.

For many years the US was in the lead in reforming its agricultural policy, arguing that protection of the most sensitive sectors (dairy, sugar, rice and cotton) should be scaled back while the more competitive sectors of grains, oilseeds and beef, along with fruits and vegetables should be allowed to trade more freely in the global market. The move in the 1996 Farm Act to offer direct payments with little production restriction was in the same direction. But recent changes in US farm policy have been more hesitant and less clearly in favor of a liberal trade regime. So trade-friendly box-shifting in the US has been sidelined for the time being as agriculture reestablishes its confidence in its ability to compete in world markets with countries such as Brazil and China.

With respect to the EU, considerable amounts of AMS support have been notified for fruits and vegetables. This is the area where cosmetic box-shifting is most likely. The reference prices are fixed, and there has been no suggestion of allowing the EU to increase these historical prices to lower the AMS (but leave domestic prices unchanged). But there is considerable scope for the modification of “eligible quantity” with respect to fruits and vegetables. The main price support activities (besides the tariff protection) are implemented through producer organizations (POs). The subsidies to these are for withholding produce from the market and engaging in market promotion and research. One could imagine the EU with some justification declaring the “eligible quantity” as that which had been taken off the market (rather than the total “eligible” production.) This would match the practice in other countries. And some part of the payments to POs could be arguably classified as “green”, though if tied to market price this may be difficult to sustain.

The EU, through its reforms, has been “box-shifting” in a trade-friendly way. The increase of subsidies classified as green box has provided the flexibility for major AMS (and OTDS) cuts. It is likely that this trend will continue so long as farmers are content with direct payments (often at a relatively generous rate) and can get reasonable prices for the products sold. Sharply lower tariff protection, combined with a fall in world prices could shake this position. Calls for the re-establishment of price-based protection could follow. However, having taken so many steps in the direction of decoupling, the chances

of a reversal are slight. More likely would be a move toward risk management tools and insurance schemes. The continued shift of payments to the green box could be problematic if challenges were made on the decoupling issue (i.e., an EU TAMS case was to be launched), although this is not very likely.

Section 5: Conclusions

This concluding section summarizes the results of the calculations and addresses the following questions:

- Would the DDA (as represented by the draft modalities of July 10) effectively constrain the domestic support policies of the EU and the US? And how might the US and the EU react to such constraints?
- What impact might tighter disciplines on adherence to the regulations, as could emerge from current litigation on the US Total AMS notifications, have on policy outcomes?
- How useful would the proposed improvements in monitoring and supervision be in the effective constraints on EU and US trade distorting support?

The analysis presented in this paper suggests that, should commodity prices remain at reasonably high levels, the constraints imposed by the DDA on the domestic policies of the EU and the US would be relatively small for some years. The US is likely to be able to keep AMS and blue box payments below negotiated limits, and the broader OTDS binding would also be respected with little change in current policy. But the constraints would have clear implications for a few commodities – particularly for cotton, rice and sugar. Significant reductions in commodity prices on world markets, exceeding about 30 percent relative to the recent past, would pose additional problems for the US. The new revenue stabilization program (ACRE) under the 2008 Farm Act could also pose a challenge to staying within new commitments even if prices stay high.

On the basis of this assessment, it appears that the United States could largely live within the DDA commitments by making selective changes in domestic farm programs. But that is not to imply that such changes would be easy to make. The experience of the two most recent Farm Bills provides sobering lessons on the possibility of agricultural policy reform in the United States. Nevertheless, WTO disciplines are likely to play an increasing role in the future debate on farm policy. They provide ammunition to those who would like to shift the emphasis of policy away from commodities and towards other targets, such as environmental quality. Whether the provision of additional ammunition makes a successful assault on traditional programs more likely to succeed remains to be seen.

The relationship between the level of the most trade distorting support (the AMS) and the WTO constraints is shown in the Figures 12a and b. These graph the difference between

the actual Total AMS (notified and projected) and the bound Total AMS under the URAA and the DDA. In the US case (Figure 12a), the reduction in the Total AMS has the effect of squeezing out a large amount of “water” from WTO commitments. As noted earlier the URAA constraint was never binding, although large support payments in the late 1990s meant that the margin for maneuver for the provision of additional support was substantially reduced. By the end of the projections period continuation of the URAA provisions would imply almost \$15 billion of “water” in the commitment. The implementation of the largest reduction percentage under the DDA draft modalities squeezes that down to roughly \$3 billion. As indicated earlier, that cushion may not be sufficient to absorb changes in support payments if world prices fall, or if price variability generates payments under the ACRE program. If the United States chooses to meet its WTO commitments on support this could imply that existing policies will have to change.

In the case of the EU the importance of continuing the pressure on the CAP to become more responsible in terms of international impacts is shown in Figure 12b. The Uruguay Round began to constrain domestic support, but that constraint was never binding. An agreement on the DDA modalities would in effect harness the CAP and eliminate the flexibility for that policy to disrupt world markets. The DDA seems likely to act as a deterrent to any backsliding on policy reform. The CAP has been modified enough that if current reform plans are implemented the DDA constraints would not pinch until about 2012. But it is widely expected that the dairy sector will be reformed at that time (the quotas are due for removal then) and that the budget allocation for the CAP will be less generous than at present. As such, the “reaction” of the EU to the tighter WTO constraints is likely to be “more of the same”.

It is important to view the constraints on domestic support in the EU in the light of other aspects of the DDA modalities for agriculture. At one level, the degree of improvement in market access will determine the domestic market conditions for many products. For fruit and vegetables, and other products without extensive price and income support mechanisms, this will in turn influence the extent to which domestic market support instruments are used. For those products where there are export subsidies still in existence, changes in the allowable level of these subsidies will again influence domestic price levels. Domestic support operates within the price environment created by trade measures such as tariffs and export subsidies. Removal of domestic support without corresponding reductions in trade barriers and export subsidies would be less than effective. Reducing trade barriers and subsidies without removing trade-distorting domestic support is also a recipe for continued disruption of trade patterns. Modifying domestic support to rely less on control of market prices and more on providing targeted assistance where needed is a valuable complement to the reduction of border measures.

One issue that might be resolved in the relatively near future is whether the way in which the US has chosen to notify particular policy instruments is in conformity with the URAA. Already this question has been raised in the context of the cotton case where the panel opined that the direct payments employed in the US are not compatible with the

green box criteria, as they exclude the possibility of farmers growing fruits and vegetables on base acres. In a follow-up case, Brazil and Canada have combined two complaints about the US notifications to challenge the notification of the Total AMS (TAMS) for a number of recent years. The claim is that if the US had notified correctly it would have been out of conformity in five of the six most recent notifications. This TAMS case raises some interesting issues for the panel to decide, but could result in a significant revision of the way in which governments (and the US in particular) notify direct payments, emergency payments and several other staple elements of domestic policy.

The US had an opportunity in the 2008 Farm Act to bring the policy instruments more clearly into line with WTO rules. In particular, the “fruit and vegetable exemption” could have been removed. But this would have met with opposition at home and the opportunity was lost in the calculus of balancing domestic interests. If the TAMS case is adjudicated in favor of Brazil and Canada, this issue will have to be addressed again, along with other aspects of domestic policy. However, in the absence of an agreement in the DDA, as noted above, the policy flexibility (“water”) would allow most policies to continue without violating WTO constraints – so long as commodity prices do not collapse.

The EU is not directly threatened by the outcome of the TAMS case if the DDA does not reach agreement. The Single Farm Payment is arguably less vulnerable than the US direct payments to challenge on green box grounds now that the payment can be made to those who produce fruit and vegetables. And in any case there is plenty of “water” left in the WTO AMS constraint and the actual level of AMS support, as shown in Table 12.

What would cause significant problems is if the DDA did reach an agreement. Under these conditions the US would be under much more pressure to revise its policy instruments to take advantage of the “safe haven” of the green box. The US would in effect be following the path of the EU by sheltering its policy transfers in a way that is immune from challenge. This could include moving to a system of “stewardship payments” that are further removed from production incentives than current instruments. Though such a move was rejected in the 2008 Farm Bill debate by those who wished to preserve current policy mechanisms, it is generally understood that changes may be necessary in the future to bring the US into conformity with its international obligations.

The EU also might be concerned about the possibility of a follow-up case, building on a ruling by the TAMS panel against the US, that claimed that the SPS was also not in fact green box (perhaps because it implies keeping land in good agricultural condition). There has been some commentary on this possibility (see Swinbank, 2007, and Swinbank and Tranter, 2005) but at a political level it seems less likely that the EU would undo its 2003 reform as a result of a negative panel report than the US will modify its direct payments to conform to green box rules.

In addition to the influence of legal challenges to existing programs there is also the possibility that the definition of what constitutes an agricultural subsidy may be opened

up for examination at some stage. The most significant of the subsidies that are not at present counted as agricultural are those surrounding the ethanol and alternative fuels strategies in both the EU and the US, though significant differences exist between the US ethanol program, based on domestic corn production and the EU biodiesel strategy relying more on oilseed crops as feedstock. Whether and when such policies might be challenged in the WTO is not certain. To initiate such a case would have to be based on a conscious decision to enter into risky waters.

The whole edifice of constraints on domestic support is built upon the notion that countries have up-to-date and reliable information as to how the policies of other countries measure up to the rules that have been agreed in the WTO. The Agreement on Agriculture set up a Committee on Agriculture with the mandate to monitor compliance with the agreement. Experience with the notification and monitoring of domestic support has shown that the current system is not working as well as originally expected. Any improvement in monitoring would be useful, both to keep countries up to date and to review more critically their notification of support into the boxes.

One difficulty arises when the political process of monitoring clashes with the legal process of determining conformity. This may rise on the agenda for the next political discussions of domestic support after the stricter limits of the DDA begin to have a major impact on country decisions. So one can expect some improvement in monitoring as well as more timely notifications as a result of the fact that the “slack” in the system is being removed. In addition, the confidence of the developing countries with the effectiveness of the constraints needs to be increased. At present there is considerable concern over the processes of box-shifting and some lack of appreciation of the difference between the cosmetic and trade-friendly varieties of notification changes.

The question of timeliness of notification of domestic support levels is largely a political matter, as countries seek to avoid “leading the way” and becoming a target for other WTO members. Consequently, more rigorous schedules for monitoring would be useful. But as important is the process of reaching an agreement on the way in which domestic policy instruments are to be notified. The IFPRI project on WTO notifications, mentioned above, has revealed wide variations in the methodology used in calculating market price support across countries. As noted above in the context of the calculation of product-specific AMS bindings, this appears to be an example of how an apparent lack of detailed scrutiny of domestic support notifications in the WTO has provided an opportunity for the creation of “policy space” in the domestic support notifications. If that continues to apply, the credibility of the constraints themselves will suffer. If an agreement can be forged in the DDA then these matters will become even more crucial.

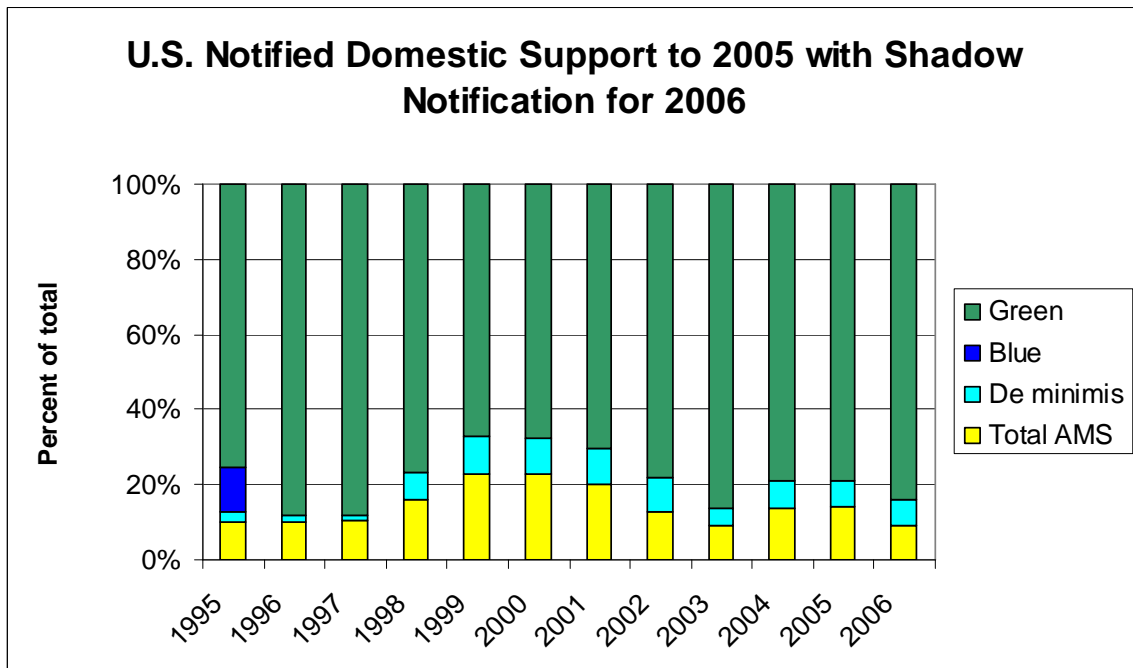
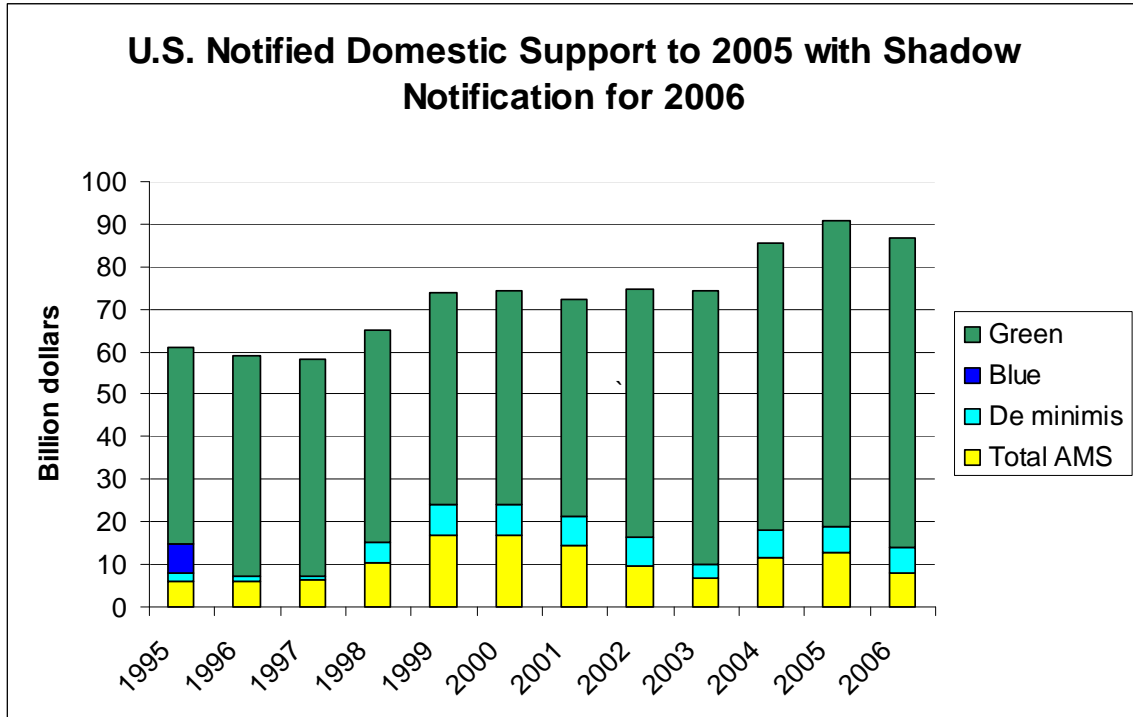
So, in conclusion, what would be the major impact of the DDA domestic support modalities as outlined in the Chairman’s Draft? Essentially, the main function of the DDA in this regard is to tighten the constraints on US and EU policy (and the policies of other industrial countries) so that they cannot revert to the massive distortions that have been seen in the past. These distortions are at their worst when world market prices are low, when the more affluent counties can maintain prices and incomes for their farmers

until market conditions improve. It is this reaction that has the most deleterious impact on developing countries. They face depressed prices without the financial resources to indemnify farmers. By curbing the ability of developed country governments to pass onto other countries the burden of adjustment the global market will become stronger.

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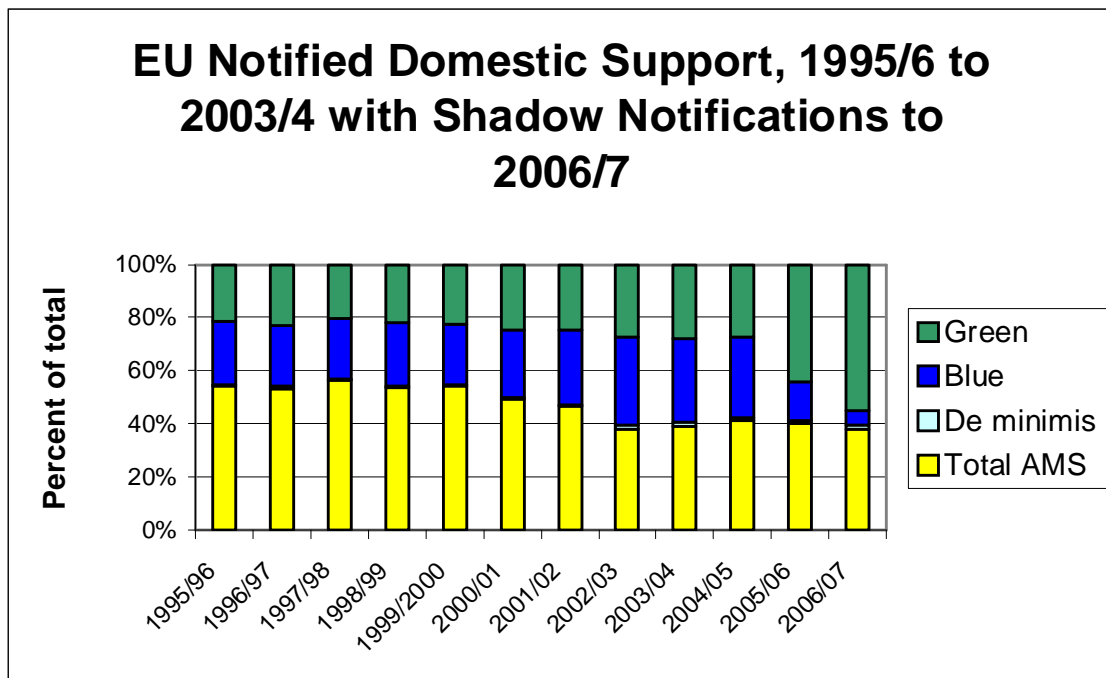
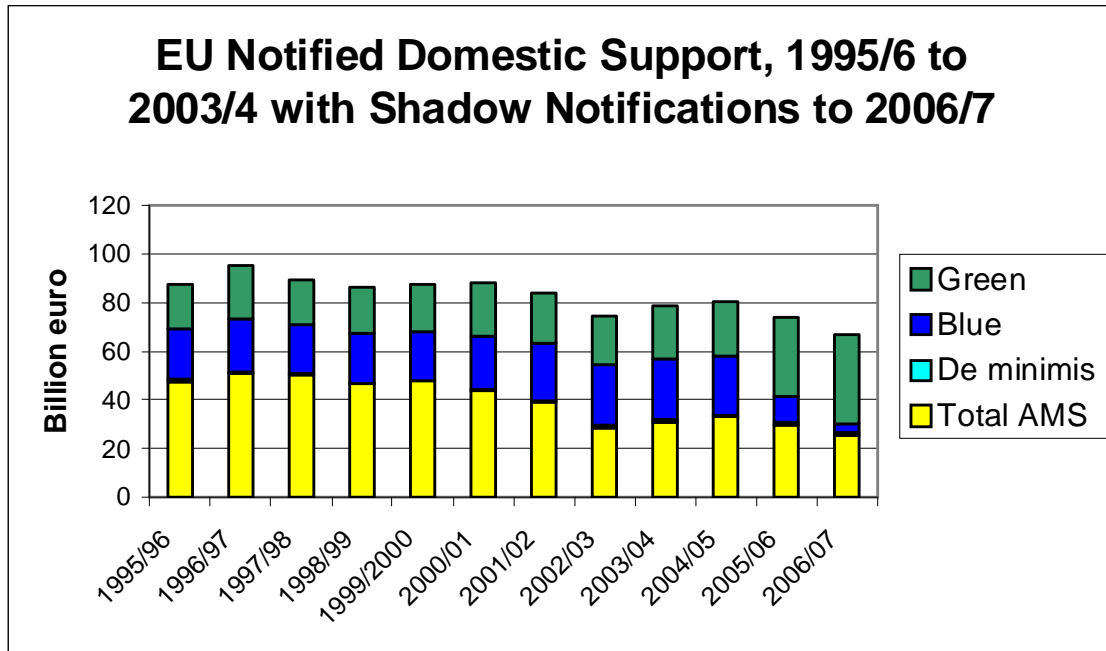
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Figure 1a: US Notifications of Domestic Support, 1995 to 2005, with Shadow Notification for 2006



Source: WTO notifications and authors' calculations

Figure 1b: EU Notifications of Domestic Support, 1995/96 to 2003/04, with Shadow Notifications to 2006/07



Source: WTO notifications and authors' calculations

Figure 2a: Current Total AMS in US relative to WTO AMS Binding

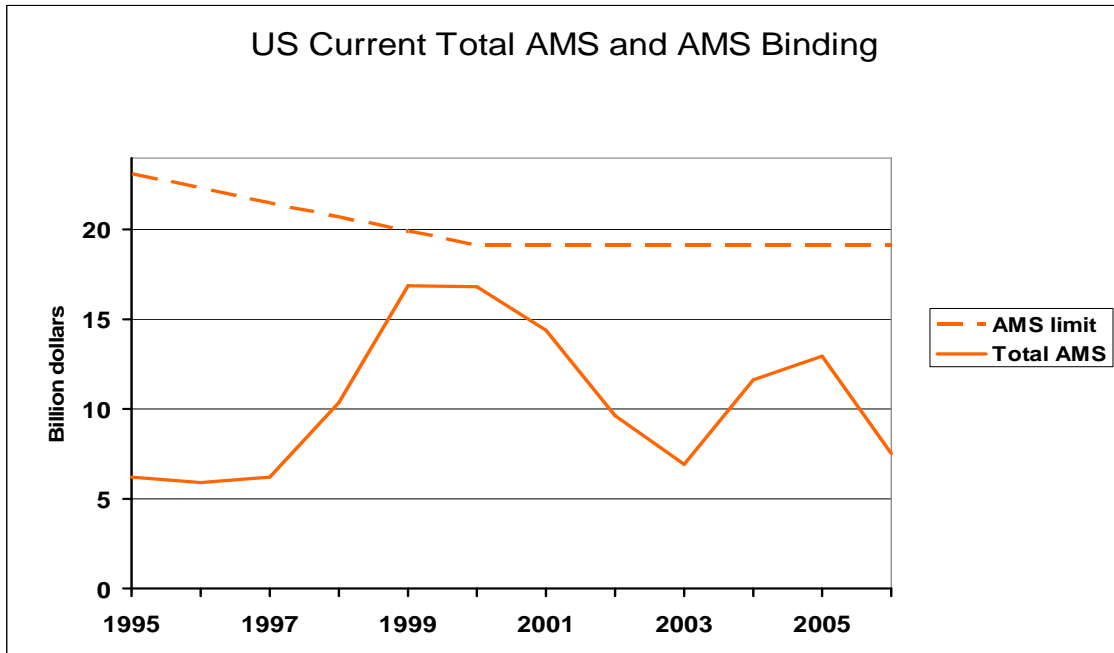


Figure 2b: Current Total AMS in EU relative to WTO AMS Binding

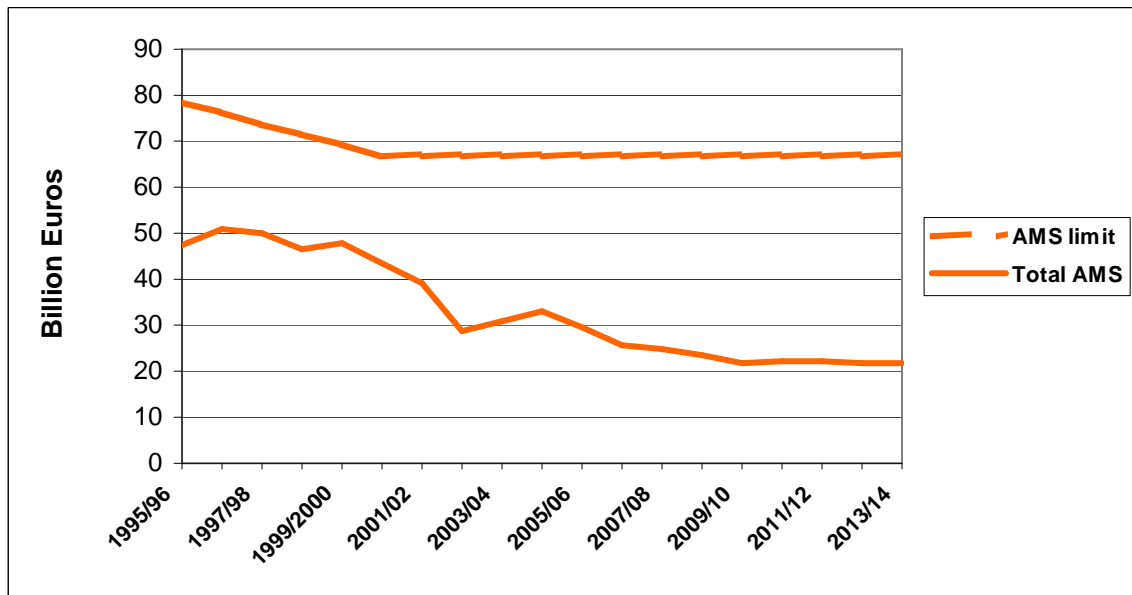


Figure 3a: Actual and Projected Notifications of Domestic Support, US, 1995 to 2014

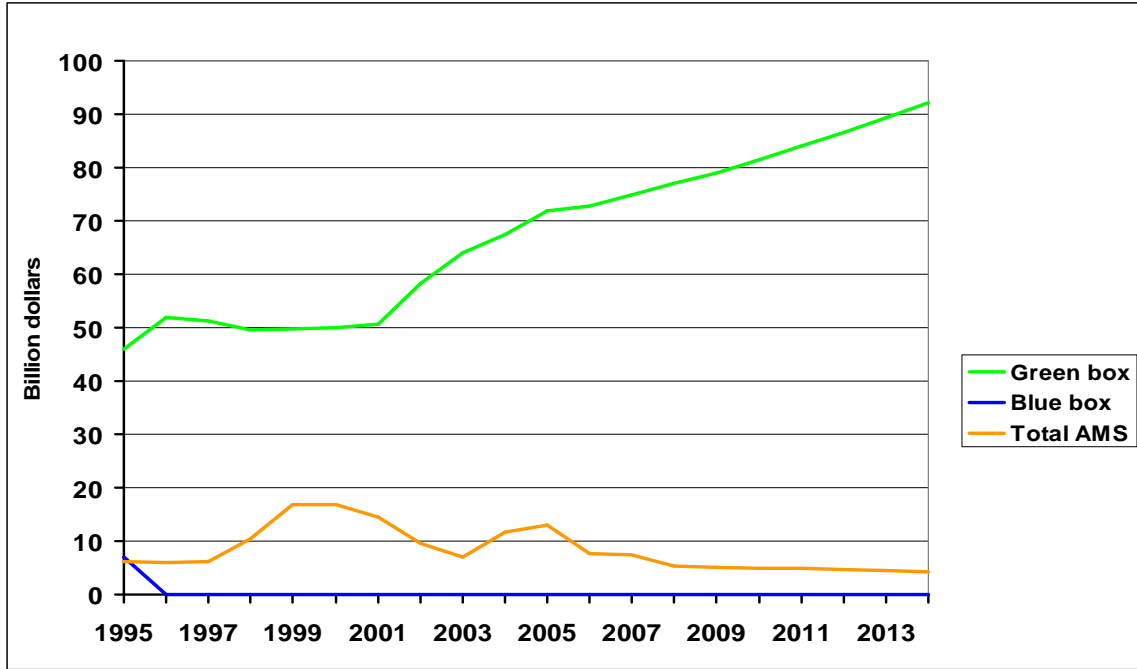


Figure 3b: Actual and Projected Notifications of Domestic Support, EU, 1995/6 to 2013/14

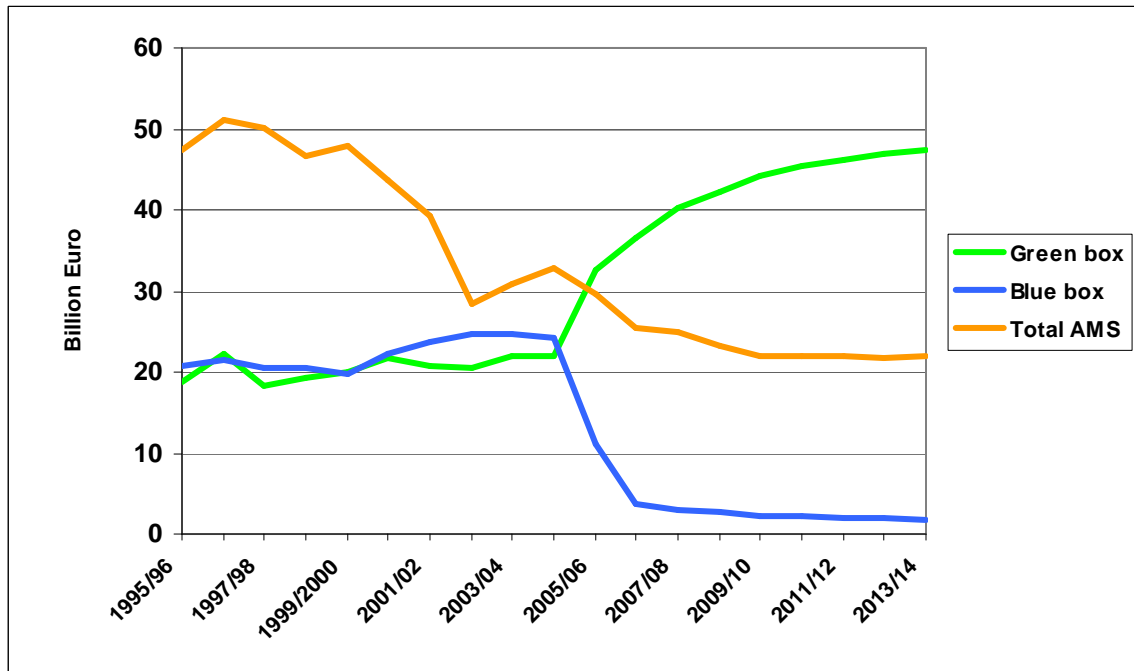


Figure 4a: Projected Notifications of Domestic Support, US, 2008 to 2014 and Proposed Limits to OTDS, AMS and Blue Box (largest reductions in Draft Modalities)

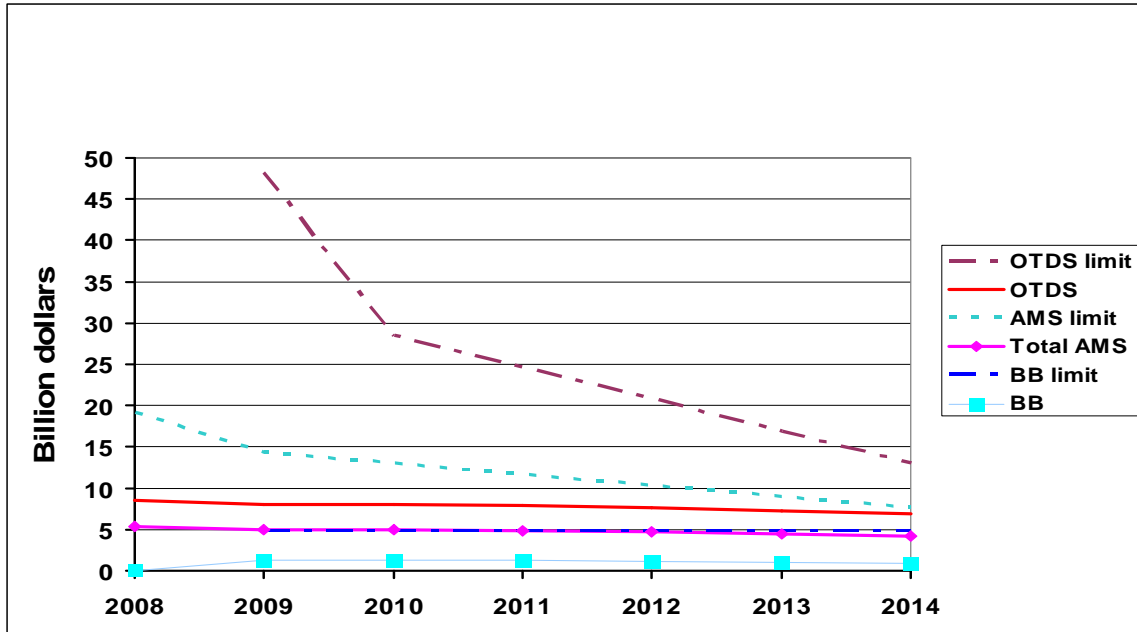


Figure 4b: Projected Notifications of Domestic Support, EU, 2007/08 to 2013/14 and Proposed Limits to OTDS, AMS and Blue Box (largest reductions in Draft Modalities)

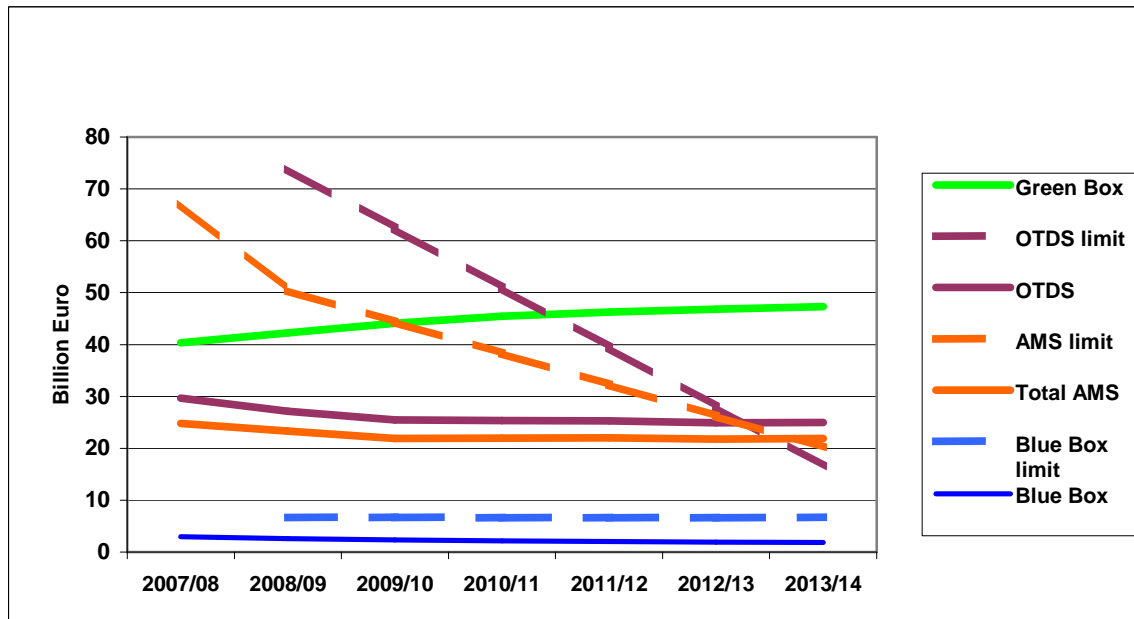
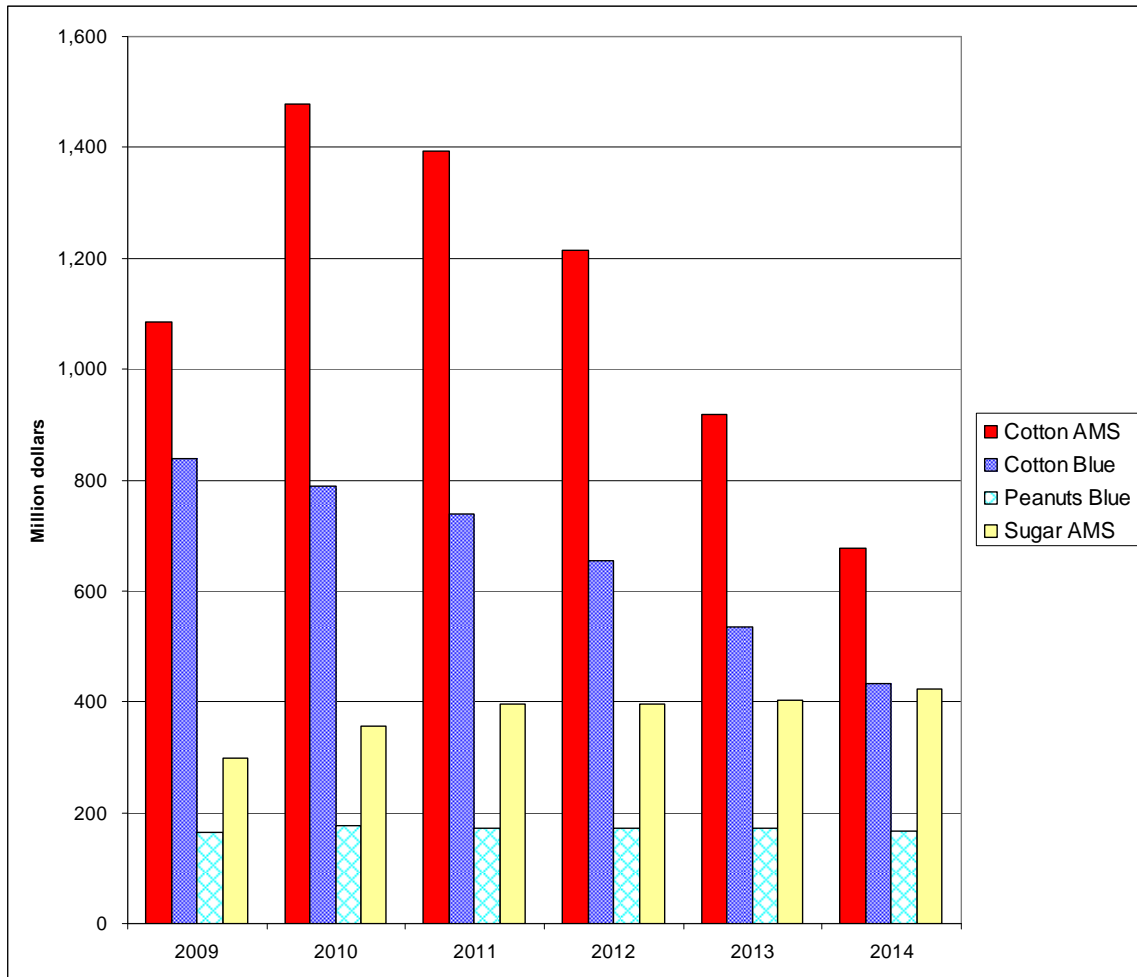


Figure 5. Extent to which Product-specific AMS and Blue Box Bindings would be exceeded by the US, 2009-2014 (110 percent option and no shift from AMS to Blue Box)



**Figure 6. Key U.S. Corn Prices during the Projections Period
(Price Pattern for the 1990s)**

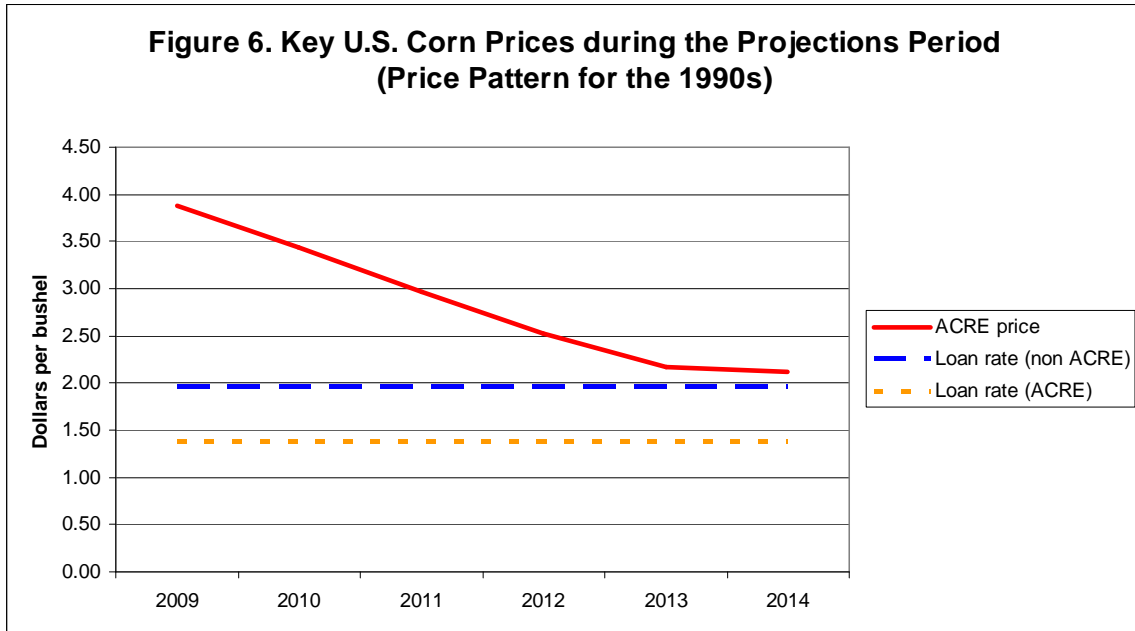


Figure 7. Amount by which Product-Specific Bindings are Projected to be Exceeded - 1970s Price Pattern

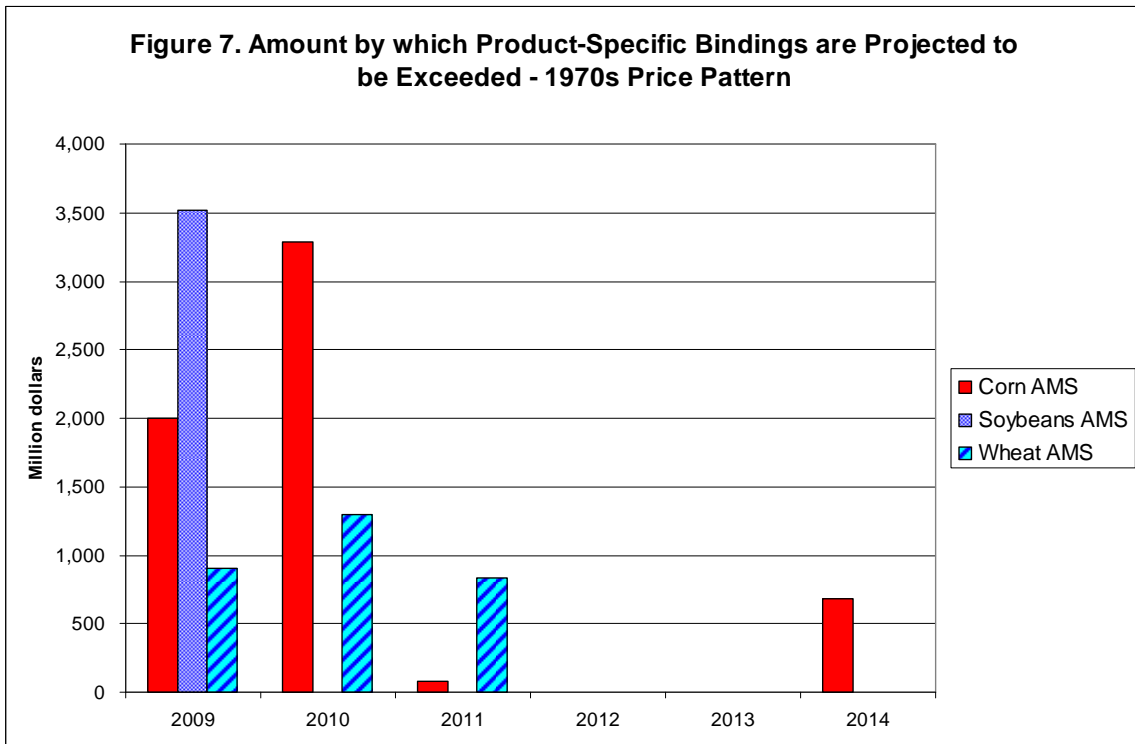


Figure 8. Amount by which Product-Specific Bindings are Projected to be Exceeded - 1980s Price Pattern

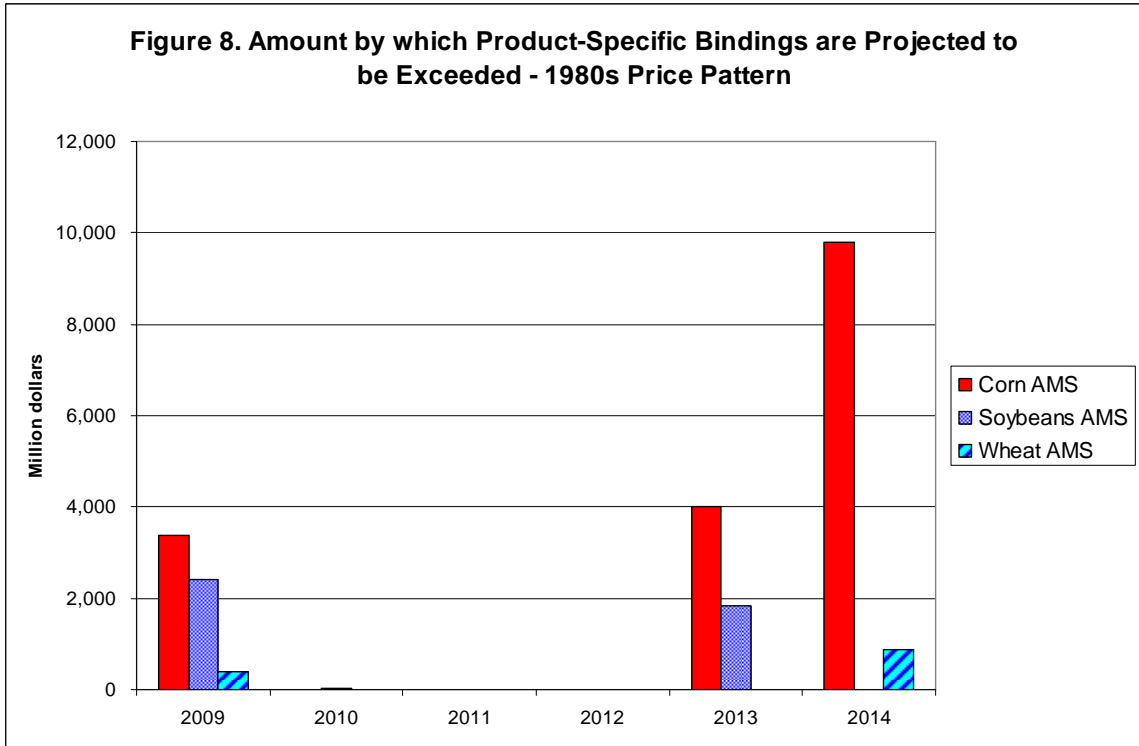


Figure 9. Amount by which Product-Specific Bindings are Projected to be Exceeded - 1990s Price Pattern

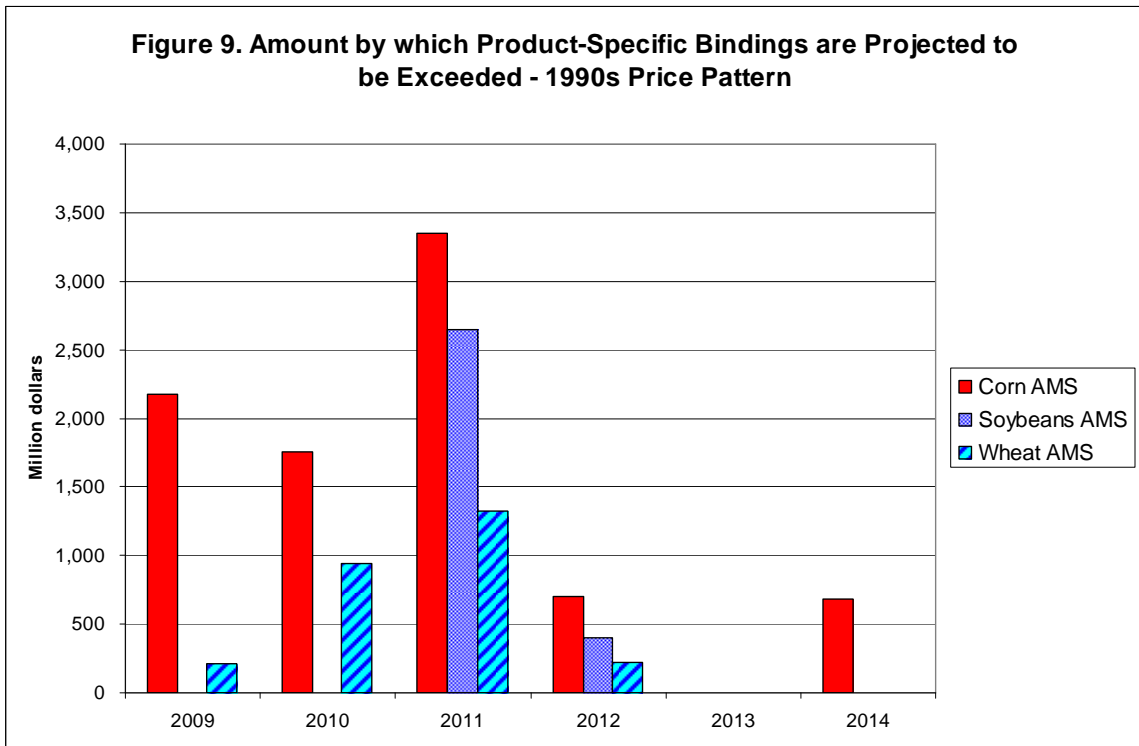
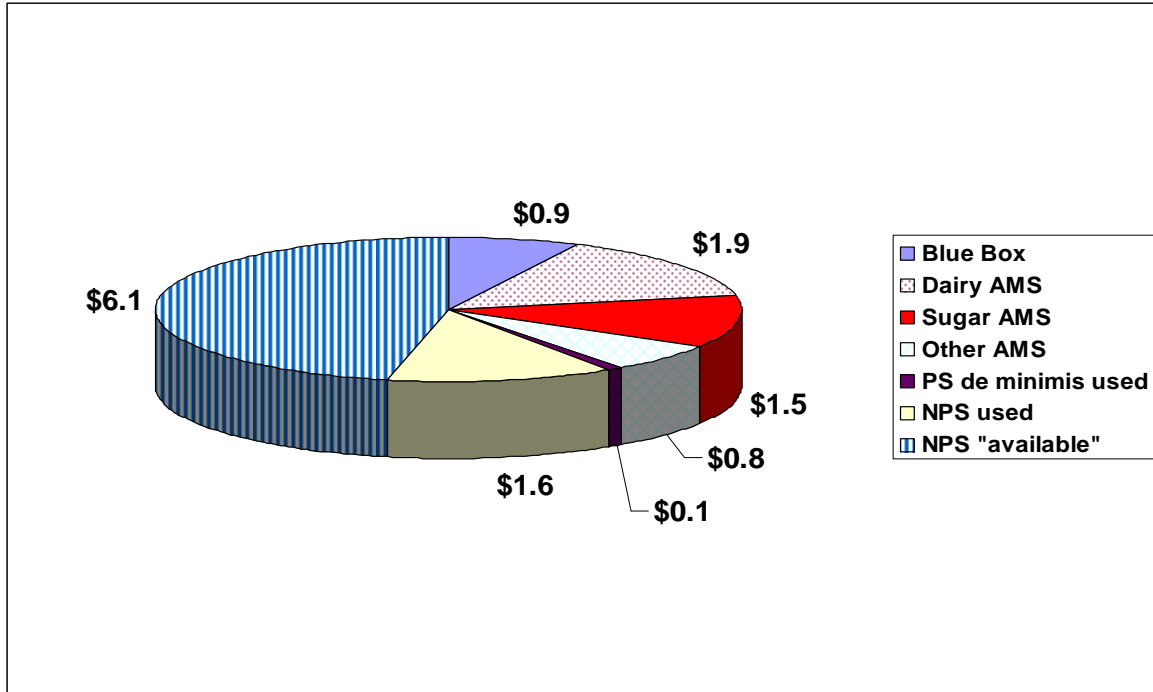
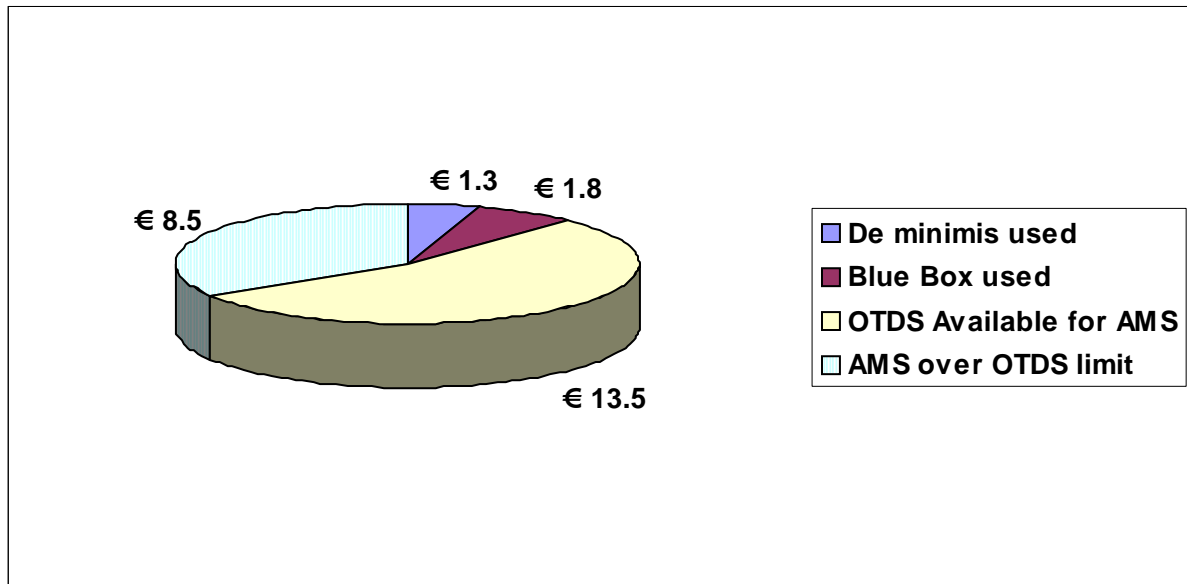


Figure 10: Projected composition of US notified support in 2014 and “available” NPS support (excluding ACRE payments), Billion \$



Source: Authors' Calculations

Figure 10: Projected composition of EU notified support in 2013/14 showing AMS exceeding OTDS limits, Billion euro



Source: Authors' Calculations

Figure 12a. Impact of DDA Constraints on US Policy "Water"
 (AMS limit less actual AMS), 1995-2014

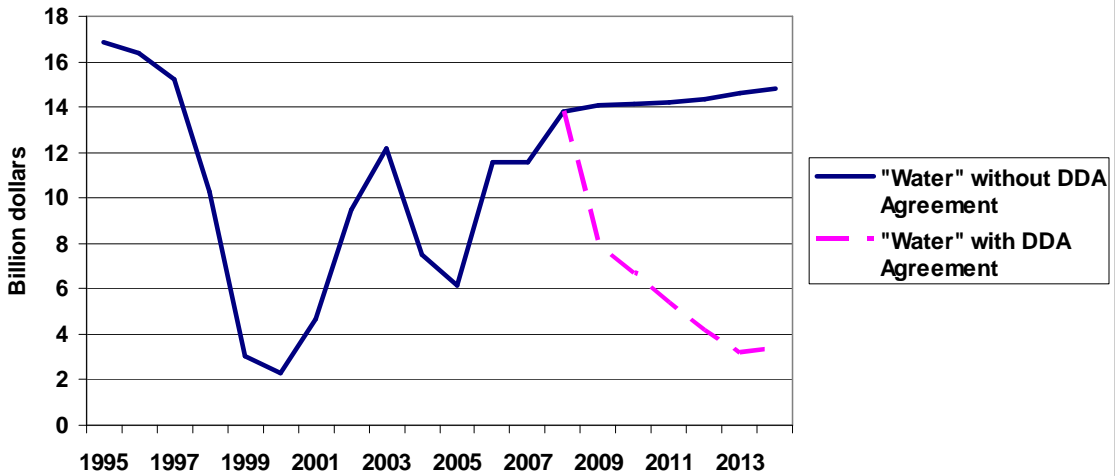


Figure 12b: Impact of DDA Constraints on EU Policy "Water"
 (AMS limit less actual AMS), 1995-2014

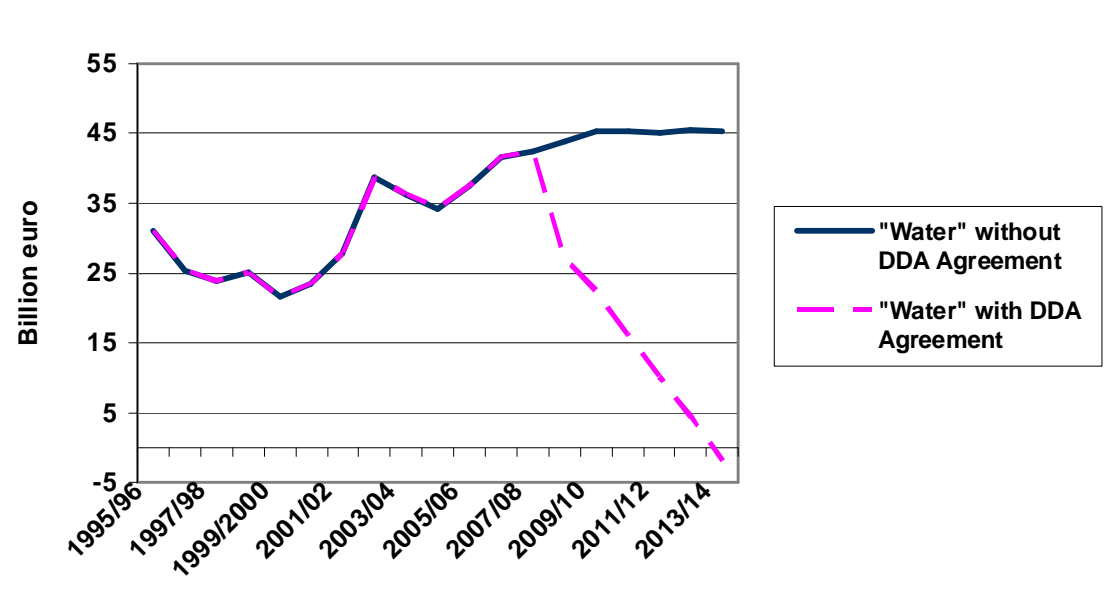


Table 1a: Main Domestic Support Provisions of the Revised Draft Modalities (July 10, 2008) as applied to the US

Item	Initial Values	Reduction
Overall Trade Distorting Support (OTDS)	Base OTDS = Final Bound Total AMS + 15% of the average value of domestic production (VOP) for 1995-2000	Total reduction of [(66%) (73%)]. Initial reduction of one third in first year; remaining reductions in five equal steps
Total Aggregate Measure of Support (AMS)	Base level is Final Bound Total AMS (from Uruguay Round schedules)	Total reduction of 60%. Reduction of 25% on first day of implementation with remaining amount in equal annual steps over five years
Product-specific AMS	Derived by applying product specific AMS averages for [1995-2004] to total PS AMS average for 1995-2000 (a)	Implemented in full on first day of implementation period, except when PS AMS in two most recent years is higher. Then limits implemented in three equal installments with starting point being the lower of the two year average or 130% of the scheduled limit
<i>De minimis</i>	Current allowance of 5% of current VOP	Reduction of 50% in allowance effective on the first day of the implementation period. Additional reduction if necessary to satisfy the OTDS binding in any given year during the implementation period
Blue Box	Counter-cyclical payments based on fixed and unchanging areas and yields, and 85% of fixed and unchanging base production would qualify	Capped at 2.5% of the average value of production (VOP) for 1995-2000 from the first day of the implementation period
Product-specific Blue Box	[(110) (120)]% of amounts derived from applying proportionately legislated maximum permissible expenditure under 2002 Farm Act to 2.5% average VOP for 1995-2000 – values as specified in the modalities	Scheduled limit can be increased with corresponding decrease in PS AMS (2 to 1) ratio for cotton Limit can be increased during implementation period subject to overall Blue Box limit being respected
Additional cotton provisions		AMS reduction of 82.22% over two years Product-specific blue box limit to be one third of that otherwise applicable

Notes: (a) Qualifications apply if product-specific AMS amounts above *de minimis* levels have been introduced since the base period (para 24) or the product-specific AMS was below the *de minimis* level during each year of the base period (para 25). In the former case, an average of the two most recent notified AMS values can be used as the base; in the latter case, the *de minimis* level for the base period may be used.

Source: Authors' summary based on WTO (2008)

Table 1b: Main Domestic Support Provisions of the Revised Draft Modalities (July 10, 2008) as applied to the EU

Item	Initial Values	Reduction
Overall Trade-Distorting Domestic Support (OTDS)	Base OTDS=Final Bound Total AMS+10 percent of the value of production in the base period (1995-2000)+average Blue Box payments in base period (a)	Base level reduction of [75] [85] percent. Initial reduction of 1/3 in first year: remaining reductions in five equal steps
Total Aggregate Measure of Support (AMS)	Base level is Final Bound Total AMS (from Uruguay Round schedules)	Base level reduction of 70 percent. Initial reduction of 25 percent in first year: remaining reductions over five years.
Product-specific AMS	Base level is average of 1995-2000	Base period levels not to be exceeded (b)
<i>De minimis</i>	Base level is five percent of value of production for non-product specific support and five percent of the value of production of products that receive product-specific support	Reduction of 50 percent from the start of the implementation period. Additional reduction if necessary to satisfy the OTDS binding in any given year during the implementation period
Blue Box		Capped at 2.5 percent of value of production in base period (1995-2000) applied from start of implementation period.
Product-specific Blue Box		Product specific caps at average value in 1995-2000 period (c).
Cotton AMS		Reduced by 84.29 percent in two years, with a 25 percent reduction in the first year

Notes: (a) Blue Box payments exceeded 5 percent of value of production in base period.

(b) Qualifications apply where product-specific AMS amounts above *de minimis* levels have been introduced since the base period (para 21) and where the product-specific AMS was below the *de minimis* level during each year of the base period (para 25). In the former case, the two most recent (notified) AMS levels may be taken as the base: in the latter case, the *de minimis* level may be used.

(c) Qualifications apply when Blue Box support was not provided for the whole of the base period (para 41) and where there is a corresponding one-for-one reduction in the AMS for a product (para 43). In the first case the EU can use the average of three years Blue Box payments and for the second the “transferred” support may exceed the Blue Box limit for that product

Source: Authors’ summary based on WTO (2008)

Table 2a: Calculation of OTDS, Total AMS and Total Blue Box Commitments for the US

URA Final Bound Total AMS (million dollars)	19,103.3
Value of production (average 1995-2000) (million dollars)	194,139.3
10% value of production (average 1995-2000) (million dollars)	19,413.9
5% value of production (average 1995-2000) (million dollars)	9,707.0
Base OTDS (million dollars)	48,224.2
OTDS (73% reduction) (million dollars)	13,020.53
OTDS (66% reduction) (million dollars)	16,396.22
DDA Final Bound AMS (60% reduction) (million dollars)	7,641.32
AMS/production 1995-2000 (a)	5.4%
Total Blue Box 2.5% value of production (1995-2000) (million dollars)	4,853.5
Cotton	
Base AMS (million dollars)	800.53
AMS reduction % (assuming 60% total AMS reduction) (b)	82.22
Note a: tests for the application of paragraph 15, less than 40%, additional effort does not apply	
Note b: Application of cotton reduction formula paragraph 55	

Source: Authors' calculations based on WTO notifications

Table 2b: Calculation of OTDS, Total AMS and Total Blue Box Commitments for the EU

URA Final Bound Total AMS (million euro) for EU-15	67,160.0
Value of Production (million euro) EU-15	222,576.5
10% value of production (1995-2000) (million euro)	22,257.7
5% value of production (1995-2000) (million euro)	11,128.8
Blue Box (in excess of 5% value of production) (a)	20,887.9
Base OTDS EU-15	110,305.6
OTDS (85% reduction) (million euro)	16,545.8
OTDS (75% reduction) (million euro)	27,576.4
DDA Final Bound Total AMS (70% reduction) (million euro)	20,148.00
AMS/production 1995-2000 (b)	21.5%
Total Blue Box	
2.5% value of production (1995-2000) (million euro)	5,564.41
Average Blue Box relative to Base OTDS (c)	19%
Cotton	
Base AMS for cotton (million euro)	752.7
Cotton AMS reduction (assuming 70% total AMS reduction) (d)	84.29
Note a: tests for Para 1 condition, picks up Blue Box when above 5% of production value	
Note b: this tests for application of paragraph 15, less than 40%, additional effort does not apply	
Note c: test for para 39: less than 40 percent so no phased reduction allowed	
Note d: Application of cotton reduction formula paragraph 55 for AMS	

Source: Authors' calculations based on WTO notifications

Table 3a: Phased Reduction of OTDS and AMS, and *de minimis* limits under the Revised Draft Modalities for the US

	Immediate	Year 1	Year 2	Year 3	Year 4	Year 5
Reductions						
Proportions of the base OTDS and AMS to be cut						
OTDS (73% reduction) (a)	0.33	0.41	0.49	0.57	0.65	0.73
OTDS (66% reduction) (a)	0.33	0.40	0.46	0.53	0.59	0.66
AMS (25% initial; 60% total reduction) (b)	0.25	0.32	0.39	0.46	0.53	0.60
Cotton AMS (25% initial; 82.22% total) (c)	0.25	82.22	82.22	82.22	82.22	82.22
Scheduled Limits						
OTDS (73% reduction) (million dollars)	32,310.2	28,452.3	24,594.3	20,736.4	16,878.5	13,020.5
OTDS (66% reduction) (million dollars)	32,310.2	29,127.4	25,944.6	22,761.8	19,579.0	16,396.2
AMS (25% initial; 60% total reduction) (million dollars)	14,327.5	12,990.2	11,653.0	10,315.8	8,978.5	7,641.3
Cotton AMS (25% initial; 82.22% total reduction) (million dollars) (d)	600.4	142.5	142.5	142.5	142.5	142.5
De minimis						
50% immediate reduction	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
Note a: Initial reduction of one third with the remainder phased-in in five equal steps (paragraph 5)						
Note b: Initial reduction of 25% with the remainder phased-in in five equal steps (paragraph 15)						
Note c: Two year phase-in period with higher total reduction percentage						
Note d: Implementation period is one-third of the general period						

Source: Authors' calculations based on WTO (2008)

Table 3b: Phased Reduction of OTDS and AMS, and *de minimis* limits under the Revised Draft Modalities for the EU

	Immediate	Year 1	Year 2	Year 3	Year 4	Year 5
Reductions						
Proportions of the base OTDS and AMS to be cut						
OTDS (85% reduction) (a)	0.33	0.43	0.54	0.64	0.75	0.85
OTDS (75% reduction) (a)	0.33	0.41	0.50	0.58	0.67	0.75
AMS (25% initial; 70% total reduction)	0.25	0.34	0.43	0.52	0.61	0.70
Cotton AMS (25% initial, 84.29% total) (c)	0.25	0.84	0.84	0.84	0.84	0.84
Scheduled Limits						
OTDS (85% reduction) (million euro)	73,904.7	62,432.9	50,961.2	39,489.4	28,017.6	16,545.8
OTDS (75% reduction) (million euro)	73,904.7	64,639.1	55,373.4	46,107.7	36,842.1	27,576.4
AMS (25% initial; 70% total reduction) (million euro)	50,370.0	44,325.6	38,281.2	32,236.8	26,192.4	20,148.0
Cotton AMS(25% initial; 84.29% total) (million euro) (d)	564.6	118.2	118.2	118.2	118.2	118.2
De minimis						
50% immediate reduction <i>de minimis</i>	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
Note a: Initial reduction of one third, with remainder phased-in in five equal steps (paragraph 5)						
Note b: Initial reduction of 25%, with remainder phased-in in five equal steps (paragraph 15)						
Note c: two year phase in period for cotton, with higher total reduction percentage						
Note d: Implementation period for cotton specified as one-third of the general period.						

Source: Authors' calculations based on WTO (2008)

Table 4a: Product specific AMS limits, US (million dollars)

	No blue box trade off					Notified AMS 2005
	Paras	Base	Year 1	Year 2	Year 3	
	Million dollars					
Apples	25	76.588	76.588	76.588	76.588	0.000
Apricots	25	1.813	1.813	1.813	1.813	0.000
Avocados	NA	0.000	0.000	0.000	0.000	0.000
Barley	23,26	35.636	32.895	30.153	27.412	46.196
Beef and Veal	25	1,254.755	1,254.755	1,254.755	1,254.755	0.000
Blueberries, wild	25	1.785	1.785	1.785	1.785	0.000
Cattle and calves	25	1,255.376	1,255.376	1,255.376	1,255.376	0.000
Chickpeas	24	0.228	0.228	0.228	0.228	0.304
Corn	23,26	1,438.375	1,327.730	1,217.086	1,106.442	4,490.004
Cotton	23,26	1,476.986	600.399	142.495	142.495	1,620.699
Cranberries	25	10.717	10.717	10.717	10.717	0.000
Dairy	23,26	4,905.901	4,864.218	4,822.535	4,780.853	5,149.254
Dry peas	24	34.771	34.771	34.771	34.771	37.431
Grapes	25	131.175	131.175	131.175	131.175	0.000
Hogs and pigs	25	512.837	512.837	512.837	512.837	0.000
Honey	23	2.891	2.891	2.891	2.891	0.000
Lentils	24	6.126	6.126	6.126	6.126	11.375
Livestock	25	1,255.376	1,255.376	1,255.376	1,255.376	0.000
Lychee	25	0.232	0.232	0.232	0.232	0.000
Minor Oil Seeds:						0.000
Canola	23	15.119	15.119	15.119	15.119	13.518
Crambe	24	0.002	0.002	0.002	0.002	0.000
Flaxseed	24	0.041	0.041	0.041	0.041	0.000
Mustard Seed	23	0.105	0.105	0.105	0.105	0.000
Rapeseed	23	0.026	0.026	0.026	0.026	0.000
Safflower	23	0.538	0.538	0.538	0.538	0.000
Sesame	23	0.011	0.011	0.011	0.011	0.000
Sunflower	23	35.544	35.544	35.544	35.544	0.000
Mohair	23	3.136	3.136	3.136	3.136	1.542
Oats	23	9.415	9.415	9.415	9.415	0.000
Olives	25	2.941	2.941	2.941	2.941	0.000
Onions	25	35.135	35.135	35.135	35.135	0.000
Orchards & vineyards	25	798.187	798.187	798.187	798.187	0.000
Peaches	25	21.979	21.979	21.979	21.979	0.000

Peanuts	23	249.190	249.190	249.190	249.190	89.185
Pears	25	14.034	14.034	14.034	14.034	0.000
Pecan trees	25	11.707	11.707	11.707	11.707	0.000
Potatoes	25	133.431	133.431	133.431	133.431	0.000
Rice	23	313.677	313.677	313.677	313.677	132.509
Rye	25	1.405	1.405	1.405	1.405	0.000
Sheep and lamb	24	7.000	7.000	7.000	7.000	0.000
Sorghum	23,26	55.378	51.118	46.858	42.598	139.751
Soybeans	23	1,123.717	1,123.717	1,123.717	1,123.717	0.000
Sugar	23,26	1,240.561	1,202.378	1,164.195	1,126.012	1,199.205
Tobacco	23	142.923	142.923	142.923	142.923	0.000
Tomatoes	25	86.202	86.202	86.202	86.202	0.000
Wheat	23	231.385	231.385	231.385	231.385	0.000
Wool	23	10.095	10.095	10.095	10.095	6.624
Total product-specific AMS		16,944.451	15,870.352	15,214.938	15,017.427	12,937.597

Note: the effective binding for cotton is that implied by the special reduction provisions

Source: Estimates based on notifications and WTO (2008).

Table 4b: Product specific AMS limits, EU (selected commodities) (million euro)

	Average AMS 1995-2000	Notified AMS 2003/04
Common wheat	2,783.6	1,454.9
Barley	2,509.1	1,859.8
Maize	904.9	391.0
Rye	297.3	243.2
Rice	463.7	420.7
White sugar	5,852.0	5,610.0
Skimmed milk powder	1,561.5	1,602.1
Butter	4,287.6	5,011.8
Beef	13,154.8	-
Dried fodder	304.7	319.1
Olive oil	1,909.9	2,649.1
Tobacco	962.4	923.9
Bananas	226.0	233.3
Apples	2,155.0	2,625.1
Pears	622.2	584.3
Peaches/Nectarines	439.5	397.8
Table grapes	247.1	185.2
Lemons	359.2	329.4
Oranges	389.5	329.4
Cucumbers	567.7	781.2
Tomatoes	3,146.4	1,887.8
Cotton	752.7	769.4
Tomatoes for processing	340.5	315.9
Other products	3,588.4	3,719.5
Total Product-specific AMS	47,825.5	49,302.4

Source: Authors' calculations based on EU notifications

Table 5a: Product Specific Blue Box limits, US (million dollars), under two options

	110 percent	120 percent
Barley	32.0	34.9
Corn	2,359.8	2,574.3
Cotton	336.3	366.9
Oats	5.3	5.8
Peanuts	149.5	163.1
Rice	234.9	256.3
Sorghum	106.8	116.5
Soybeans	400.4	436.8
Wheat	1,041.1	1,135.7
Total	4,666.1	5,090.3

Note: The figures for cotton are adjusted values implied by paragraph 55, rather than the unadjusted figures in the revised draft modalities

Source: WTO (2008) and authors' calculations

Table 5b: Product Specific Blue Box limits, EU (million euro)

	Average 1995-2000	Notified AMS 2003/04
Payments- fixed area and yields		
Maize payments	1,206	1,198
Other cereals	9,404	10,802
Oilseeds payments	2,126	1,361
Pulses payments	548	507
Flaxseeds payments	147	70
Set-aside compensation	1,640	1,843
Durum supplements	1,020	1,113
Voluntary set-aside payments	0	70
Silage payments	10	110
Rice payments	60	0
Total crop payments	16,161	17,074
Livestock payments - fixed number of head		
Suckler cow premium	1,876	2,092
Special beef and veal premium	1,352	1,929
Slaughter premium	494	1,727
Beef supplemental payments	25	489
De-seasonalization premium	22	0
Ewe and goat premium	1,370	1,471
Total livestock payments	4,727	7,708
TOTAL BLUE (notified)	20,888	24,782

Source: Authors' calculations based on EU notifications

Table 6. US Blue Box product-specific bindings and the trade-off with AMS product-specific bindings

Reduction of the initial PS AMS to meet the legislated maximum CCP for each commodity

	AMS binding (1)	Blue binding 110%	Blue binding 120%	Legis. Max. CCP	Reqd. cut in AMS with 110% Blue binding	New initial PS AMS	Max feasible Blue binding (2)	Reqd. cut in AMS with 120% Blue binding	New initial PS AMS	Max feasible Blue binding (2)		
	Column					Column						
	A	B	C	D	E	F	G	H	I	J	K	L
	Million \$					Million \$					Million \$	
Barley	27.4	32.0	34.9	46.7	14.7		12.7	46.7	11.8		15.6	46.7
Corn	1,106.4	2,359.8	2,574.3	3,224.2	864.4		242.0	3,224.2	649.9		456.5	3,224.2
Cotton	800.5	336.3	366.9	1,376.5	2,080.4	INF	0.0	1,136.8	2,019.2	INF	0.0	1,167.4
Oats	9.4	5.3	5.8	8.7	3.4		6.0	8.7	2.9		6.5	8.7
Peanuts	249.2	149.5	163.1	200.9	51.4		197.8	200.9	37.8		211.4	200.9
Rice	313.7	234.9	256.3	323.1	88.2		225.5	323.1	66.8		246.9	323.1
Sorghum	42.6	106.8	116.5	147.4	40.6		2.0	147.4	30.9		11.7	147.4
Soybeans	1,123.7	400.4	436.8	550.3	149.9		973.8	550.3	113.5		1,010.2	550.3
Wheat	231.4	1,041.1	1,135.7	1,421.5	380.4	INF	0.0	1,272.5	285.8	INF	0.0	1,367.1
Total	3,904.4	4,666.1	5,090.3	7,299.3				6,910.6				7,035.8

INF = infeasible

(1) it is assumed that the applicable figures for the calculation are the bindings that result after the application of any reduction provisions

(2) where insufficient PS AMS entitlement exists to reach the legislated maximum CCP, the maximum PS AMS entitlement is applied to the Blue Box

In the case of cotton, a \$1 increase in the Blue Box entitlement requires a \$2 reduction in the PS AMS; this is applied to the figure in column 1

Cotton blue box bindings are reduced substantially by the paragraph 56 condition

Increases in Blue Box limits only apply if initially scheduled; any subsequent changes would require reductions elsewhere, such that the initial overall Blue Box limit is not exceeded (paragraph 45).

Note: Totals in bold exceed permitted Blue Box total of \$4,835.5 million

Source: Authors' calculations based on WTO notifications

Table 7. Average reduction in market prices needed to trigger Blue Box and AMS Bindings in 2009-2014

Commodity	AMS binding	Blue Box Binding
Barley	53	43
Corn	48	42
Cotton	(1)	(1)
Peanuts	41	(1)
Rice	56	40
Soybeans	47	40
Wheat	39	31

(1) Bindings projected to be exceeded under current policies

Source: Calculated from the US Domestic Support Simulator

Table 8. Summary of price variation for the three major crops

	Average annual change in prices				
	Baseline	1970s	1980s	1990s	1960-2007
Corn	2%	14%	19%	10%	16%
Soybeans	1%	20%	18%	9%	15%
Wheat	3%	19%	8%	11%	16%

Source: Calculated from USDA data

Annex Table: Product Specific AMS Bindings in the EU under Proposals in the Draft Modalities for July 2008

<i>Product</i>	Product-specific AMS bindings (million euro)					Notification 2003/04
	Average AMS 1995-2000	Base AMS	year 1	year 2	year 3	
Common wheat	2,784	2,784	2,784	2,784	2,784	1,455
Durum wheat	-	-	-	-	-	-
Barley	2,509	2,509	2,509	2,509	2,509	1,860
Maize	905	905	905	905	905	391
Rye	297	297	297	297	297	243
Oats	10	10	10	10	10	-
Sorghum	20	20	20	20	20	9
Triticale	211	228	222	217	211	275
Rice	464	464	464	464	464	421
White sugar	5,852	5,852	5,852	5,852	5,852	5,610
Skimmed milk powder	1,562	1,623	1,603	1,582	1,562	1,602
Butter	4,288	4,728	4,581	4,434	4,288	5,012
Milk	-	-	-	-	-	-
Beef	13,155	13,155	13,155	13,155	13,155	-
Pigmeat	0	0	0	0	0	-
Dried fodder	305	319	314	309	305	319
Chick-peas, lentils and vetches	70	71	71	70	70	71
Olive oil	1,910	2,386	2,227	2,069	1,910	2,649
Tobacco	962	962	962	962	962	924
Bananas	226	244	238	232	226	233
Apples	2,155	2,372	2,300	2,227	2,155	2,625
Pears	622	622	622	622	622	584
Apricots	124	124	124	124	124	110
Cherries	136	166	156	146	136	203
Peaches/Nectarines	439	439	439	439	439	398
Table grapes	247	247	247	247	247	185
Plums	77	85	82	79	77	96
Lemons	359	359	359	359	359	329
Clementines	188	195	193	190	188	188
Mandarins	48	48	48	48	48	30
Satsumas	32	32	32	32	32	22
Oranges	390	390	390	390	390	329
Cucumbers	568	687	647	607	568	781

Product-specific AMS bindings (continued)							
<i>Product</i>	Average AMS	Base				Notification	
	1995-2000	AMS	year 1	year 2	year 3	2003/04	
Courgettes	152	152	152	152	152	112	
Artichokes	185	186	186	185	185	179	
Tomatoes	3,146	3,146	3,146	3,146	3,146	1,888	
Wine	1,711	1,711	1,711	1,711	1,711	-	
Ethly alcohol of agricultural origin	-	-	-	-	-	99	
Seed for sowing	100	100	100	100	100	108	
Hemp	14	14	14	14	14	1	
Flax fibre	101	101	101	101	101	17	
Silkworms	0	0	0	0	0	0	
Hops	15	15	15	15	15	13	
Cotton	753	753	753	753	753	769	
Cauliflower	3	3	3	3	3	-	
Aubergines	-	-	-	-	-	0	
Other Fruit and vegetables	0	0	0	0	0	2	
Asparagus	-	-	-	-	-	-	
Citrus fruit for processing	150	195	180	165	150	193	
Lemons for processing	37	38	37	37	37	46	
Tinned pineapple	4	4	4	4	4	-	
Peaches for processing	69	69	69	69	69	12	
Plums for processing	33	35	34	33	33	35	
Pears for processing	32	32	32	32	32	16	
Figs for processing	5	6	6	6	5	6	
Tomatoes for processing	341	341	341	341	341	316	
Grapes for processing	61	79	73	67	61	115	
Potatoes for processing to starch	-	-	-	-	-	-	
Total product-specific AMS	47,826	49,302	48,810	48,318	47,826	30,880	

Source: Authors' calculations based on WTO (2008)