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Domestic Support for the U.S. Rice Sector and the WTO: Implications of the 2002 Farm Act

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Abstract

The U.S. rice sector is expected to receive some of the largest relative support under the 2002 Farm Act. USDA's rice baseline model is used to compute marketing loan benefits, while direct payments and counter-cyclical payments are estimated from endogenous prices and exogenous policy parameters. Alternative scenarios of reduced marketing loan benefits suggest that projected annual average sector revenue could decline by 4 to 27 percent.

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Introduction

U.S. rice farming has been highly influenced by federal legislation since the enactment of the Agricultural Adjustment Act of 1933. A major objective of U.S. rice policy has been to support farm price and income, thus providing a safety net for the rice sector. U.S. rice policy and support of the rice sector has long been a domestic issue but has also become a global issue since the Uruguay Round Agreement on Agriculture (URAA) obligated the U.S. to reduce trade distorting domestic support, tariffs, and export subsidies on agricultural commodities.

Since enactment of the URAA, most of the support provided to the U.S. rice sector has been through domestic support, rather than border policies or export subsidies.² The World Trade Organization (WTO) is interested in a country's domestic support programs because policies that support prices or subsidize production may encourage production and distort trade flows by causing a decline in imports and/or an increase in exports.

On May 13, 2002 a new U.S. Farm Act, entitled the *Farm Security and Rural Investment Act of 2002*, was signed into law covering a period of 6 years. This legislation continues the marketing loan program,³ planting flexibility, and direct payments available under the 1996 Farm Act, but creates a new counter-cyclical payment (CCP).⁴ Direct payments replace the production flexibility contract payments from the 1996 Act. Counter-cyclical payments replace *ad hoc* market loss assistance payments provided by Congress on an annual basis in 1998-2001. The new farm bill caused concern among many countries that the U.S. may not be able to meet its current WTO AMS commitments.

² Developed countries, such as the U.S., rely on domestic support policies to provide their producers with a safety net. U.S. rice tariffs are very low and do not facilitate the operation of the domestic support program. The U.S. has not used export subsidies for rice since 1995.

³ Compared to the 1996 Farm Act, additional commodities are eligible for marketing loan benefits: peanuts, wool and mohair, honey, small chickpeas, lentils, and dry peas.

⁴ Soybeans, minor oilseeds, and peanuts are now eligible for direct and counter-cyclical payments.

A crucial question is whether income support for rice will increase substantially under the new Act. Also, will domestic support for U.S. rice expand beyond the commodity specific “*de minimis*” exemption and thus contribute to the U.S. Aggregate Measurement of Support (AMS)? What does the Doha Development agenda suggest for future levels of domestic support?

Objectives

This paper describes the criteria used by the URAA in classifying different policies as trade distorting or non-distorting, it identifies U.S. rice income support policies and how they are notified to the WTO (green, amber, or blue box), and it determines rice’s contribution to the U.S. AMS. Next, income support projections from the 2002 U.S. Farm Act are presented and compared to income support from the 1996 Farm Act to determine potential effects to rice income support. Lastly, alternative marketing loan benefit reduction scenarios are examined to identify their effects to U.S. rice sector revenue.

Domestic Support and the URAA

The URAA distinguishes between domestic support policies that are considered production or trade distorting (“amber box”) and non- or minimally-distorting (“green box”), and requires WTO member countries to annually report all support provided to domestic agricultural producers.⁵ The total value of support related to policies in the “amber box” is referred to as the AMS. Countries agree to keep their AMS from exceeding limits set forth in the URAA. The maximum commitment level for U.S. “amber box” support in 1995 was \$23.1 billion, which declined to current ceiling at \$19.1 billion in 2000. These support ceilings represent a 20 percent reduction from the 1986-88 base support level over the implementation period of 1995-2000 for developed countries (13 percent from the base over the implementation period of 1995-2004 for developing countries) (Hoffman and Dohlman, 2001).

Amber box policies subject to reduction include price supports, marketing loans, direct payments based on current production and price levels, input subsidies, and certain subsidized loan

⁵ Definitions of specific trade policy terms can be found at the following website: (www.ers.usda.gov/briefing/WTO/Glossaries.htm).

programs. Individual commodity support has flexibility from the concept of aggregate measurement of support, since the reduction commitments do not apply to specific commodities but to the total value of support for a country. If support for a specific commodity is equal to or less than 5 percent of its production value (10 percent for developing countries), it is not counted towards the AMS limits. This “*de minimis*” exemption provides some flexibility to a country in the design of its domestic support policies for specific commodities.

Amber box policies that are non-commodity specific and subject to reduction include, for example, water subsidies, grazing program outlays, insurance indemnities less producer premiums paid, credit programs, crop market loss, and multi-year crop disaster. The “*de minimis*” exemption is equal to or less than 5 percent of the total value of all agriculture production. This compares to the commodity-specific exemption, which is equal to or less than 5 percent of the commodity’s value of production.

Direct producer payments under certain production-limiting programs (referred to as “blue box” policies) are exempt from reduction (not included in the current AMS) as long as they satisfy specific criteria. Specifically, the program must be production limiting, with payments based on fixed area and yield, or on 85 percent or less of the base level of production or fixed number of livestock.

Support from policies with minimal impacts on trade or production (green box policies) is also excluded from the AMS. Examples of these policies include public stockholding, natural disaster relief, marketing and promotion, inspection, extension services, pest and disease control, food aid, and research. They also include producer payments that are minimally distorting to production, such as certain forms of de-coupled income support not tied to production, assistance to help producers make structural adjustments, and direct payments under environmental, conservation, and resource retirement programs.

U.S. Domestic Support for Rice

National legislation has affected and shaped the U.S. rice sector over the past seven decades.⁶ Price support, income support, and supply control programs made major contributions to the safety-net programs for the U.S. rice sector. A more complete history of U.S. rice support can be found in (Setia et. al., 1994) and (Schnepf and Just, 1995). Beginning with the inception of the URAA in 1995, U.S. rice policy is examined to determine what kinds of income support policies were available to U.S. rice producers and to determine how they were notified to the WTO.

During the implementation period of the URAA, 1995-2002, domestic support provided to the U.S. rice sector has come from income support specified by different farm Acts, *ad hoc* assistance provided by Congress in the form of emergency and supplemental support, subsidized crop and revenue insurance, and trade promotion programs such as export credit guarantees. During 1995, the first year of the URAA implementation period, the U.S. rice sector received most of its support under provisions of the 1990 Farm Act. A bulk of the support came from target price deficiency payments, as no marketing loan benefits were made that year (Fig. 1). The deficiency payments paid to rice producers in crop year 1995 totaled \$471 million, representing about 22 percent of sector revenue. This support was notified to the WTO as “blue box”.

1996 Farm Act

The 1996 FAIR Act was in effect for most of the URAA implementation period and this Act significantly changed the price and income support mechanisms for rice and other grains. The income support program of target price deficiency payments was eliminated along with the ARP, 50/85-92 and NFA/OFA programs. The Act established a seven-year payment contract for eligible farmers and ranchers. Program participants were eligible for production flexibility contract (PFCs) payments. In 2000/01, the PFC payment rate was \$2.60 per cwt. Participants received payments on 85 percent of their contract acreage and the program yield was frozen at mid-1980 levels. Under this system, all program crop producers were provided nearly complete flexibility in planting decisions. However, flexibility hasn't had a huge impact on rice acreage because most crops do not do well on land devoted to rice. Owners of rice base acreage received

⁶ Definitions of specific farm policy terms can be found at the following website: (www.ers.usda.gov/briefing/FarmPolicy/glossary.htm).

a contract payment whether they produced rice or not. Thus, production decisions were determined primarily by expected market returns relative to other crops.

Production flexibility contract (PFC) payments for rice meet specific WTO criteria for “green box” payments. The amount of a producer’s PFC payments depends on past program participation and does not depend on current market prices, production, or resources. The U.S. rice sector received annual PFC payments that ranged from \$348.0 million to \$499.8 million between 1996 and 2002 (USDA, 2003 b).

In addition to annual PFC payments, a marketing loan program was provided to U.S. rice producers. Producer support under the marketing loan program included both loan deficiency payments and marketing loan gains. Payment rates were based on the difference between the announced weekly world price and the established loan rate, with payments possible when the announced world rice price is less than the loan rate.

Payments received by farmers from the marketing loan program vary from year to year. From 1995/96 through 1997/98, the announced world price exceeded the loan rate of \$6.50 per cwt., so no marketing loan payments were made. However, in early 1999 when world prices began to fall, marketing loan payments were available. A steady decline in world rice prices pushed these payments to more than a \$1 per cwt. in August 1999, and by the end of the 1999/2000 crop year, they exceeded \$3 per cwt. For 1999, government payments for the rice marketing loan program totaled \$395 million (fig. 1) (USDA, 2003 b).

A rice producer may purchase commodity certificates in exchange for the outstanding loan collateral at or before loan maturity. The commodity certificate can be purchased at the repayment rate in effect on the date of the request. Any market gain realized from a commodity certificate exchange is not applied to payment limitations but is considered income to the producer. These provisions enable producers who are facing payment limits an opportunity to benefit from the lower repayment rates. Certificate gains for rice ranged from \$57 million in 1999 to \$303 million in 2002.

Marketing loan program benefits, including commodity certificate gains, for U.S. rice were included under the URAA “amber box” category. The producer benefits depend on the level of current rice production and the announced world price for rice relative to the commodity loan rate. Recent research shows that levels of realized per-unit rice revenues facilitated by marketing loans have exceeded commodity loan rates when crop prices are relatively low (Westcott and Price, 2001). This finding is likely caused by producers receiving program benefits when prices are seasonally low (and benefits high) and selling their crop later in the marketing year when prices have risen. The historical above-loan-rate level of realized per-unit revenues likely influences expectations of per-unit revenues in subsequent years. This policy effect raises producers’ expected net returns and can lead to increased production and exports, depending on the cross-commodity effects.

Increased world rice production in the mid-1990s caused world prices to fall and stocks to rise (fig. 2). In response to low commodity prices and other problems such as weather-related disasters, the U.S. Congress provided supplemental market loss (MLA) assistance payments to recipients of PFC payments in 1998, 1999, 2000, and 2001.⁷ Emergency rice payments for 1998 equaled approximately 50 percent of that year’s PFC payment or \$1.45 per cwt. In 1999 and 2000 contract owners received MLA payments equal to the 1999 PFC payment rate of \$2.82 per cwt. The payment rate for 2001 was \$2.39 per cwt.

MLA payments have been notified to the WTO as non-commodity specific “amber box” payments. Each producer’s MLA payment is determined by past program participation, not by current production, but in response to current market price experiences. MLA payments do not meet “green box” criteria because they were given in response to low market prices.

Government payments rose substantially after 1997/98, a result of declining world prices triggering marketing loan benefits (loan deficiency payments and marketing loan gains) and *ad hoc* and market loss assistance payments authorized by congress. For example, in 1997/98 the only payments mad to the rice sector were production flexibility contract payments of \$448

million. By 1999/2000 all government rice payments exceeded \$1.3 billion (table 3). These included \$466 million in PFC's, \$401 million in LDPs, MLGs, and commodity certificate gains, and \$465 million in MLAs (fig. 1). Government support represented about 22 percent of total rice sector revenue in crop years 1995 and 1996, but beginning in 1998 this proportion rose substantially and reached 62 percent in 2001/02 and 2002/03. However, as mentioned previously, not all of this support is included in the "amber box".

Crop Yield and Revenue Insurance

Producers of specific crops can purchase insurance policies at a subsidized rate under Federal crop insurance programs (USDA, b). These insurance policies make indemnity payments to rice producers based on current losses related to either below-average yields (crop yield insurance) or below-average revenue (revenue insurance) (table 1). Between 1995 and 2002, 55 to 97 percent of the acres planted to rice have used some form of crop or revenue insurance. WTO member countries report the indemnity minus producer premium, or net indemnity, to the WTO as an insurance subsidy. Based on these criteria, domestic support for rice crop/revenue insurance has ranged from -\$1.1 million to \$41.1 million between 1995 and 2002.

Crop insurance influences production decisions and therefore prices. Government crop insurance subsidies are likely to alter producer behavior because they lower the cost of purchasing coverage. The cost reduction represents a benefit to producers that raises expected returns per acre and provides an incentive to expand area in crop production. Research results suggest that acreage impacts of subsidized crop insurance are small. Planted area to rice was estimated to rise by 1 percent and prices were expected to decline by 3 percent, due to these subsidies (Young, Vandever, and Schnepf, 2001).

The benefits received by rice producers from the crop and revenue insurance programs are considered to be production distorting "amber box" programs under the URAA. Since these programs are administered using non-commodity specific (generic) provisions, they count

⁷ The Agricultural Assistance Act of 2003 was signed into law on February 20, 2003. One program contained in the Act is the Crop Disaster Program. Damages must be in excess of 35 percent for either 2001 or 2002 crop. Producers must choose one year but not both to establish their loss. Program signup begins June 6, 2003.

toward the U.S.'s AMS only if total benefits from all non-commodity specific "amber box" programs exceed 5 percent of the total value of U.S. agricultural production.

Export Assistance and Promotional Programs

U.S. rice exports benefit from U.S. food aid programs, export credit guarantees and market promotion. The U.S. donates rice to needy countries either bilaterally or through the World Food Program, and sells rice on concessional credit terms. USDA currently provides food aid abroad through three channels: the Public Law 480 (P.L. 480) program, the Section 416 (b) program, and the Food for Progress program (Childs, 2001). U.S. rice exports under the food aid programs totaled about 400,000 tons in fiscal 2000, about 18 percent of U.S. rice exports.

USDA provides export credit guarantees for commercial financing of U.S. agricultural exports. The CCC administers export credit guarantee programs for commercial financing of U.S. agricultural exports to buyers in countries where financing may not be available without CCC guarantees. For fiscal 1999 and 2000, annual U.S. rice exports shipped under credit guarantees averaged more than 200,000 tons, about 8 percent of total U.S. rice exports. Some countries want to treat guaranteed export credits as export subsidies and would like to discipline them (or restrict their use). The U.S. proposed the establishment of a set of rules to govern export credit activity by WTO members (USDA, 2002 b).

USDA funds different programs that promote and develop foreign markets for U.S. agricultural products (USDA, g). For example, the Market Access Program (MAP) helps finance promotional activities such as consumer promotions, market research, technical assistance, and trade servicing. The Foreign Market Development Program (FMD) aids in the developing, maintaining, and expanding of long-term export markets for U.S. agricultural products. Some other programs available include the Facility Guarantee Program (FGP) and the Quality Samples Program (QSP). The FGP provides payment guarantees to facilitate the financing of goods and services exported from the U.S. to improve or establish agriculture-related facilities in emerging markets. The QSP helps U.S. agricultural trade organizations provide product samples to potential importers.

Rice's Contribution to the U.S. AMS

The U.S. has notified the WTO concerning its AMS expenditures for 1995 through 1999. However, in only one year, 1999, have rice “amber box” expenditures contributed to the U.S. AMS. The “*de minimis*” exemption excluded rice “amber box” expenditures from the AMS in 1995-1998. The total value of “amber box” support, mostly marketing loan benefits, was less than 5 percent of the value of U.S. rice production for most years. *Ad hoc* MLA payments and crop insurance subsidies are reported as non-commodity specific “amber box” and the sum of these non-commodity specific expenditures are subject to a “*de minimis*” exemption equal to 5 percent of the total U.S. production of all commodities.⁸

Based on U.S. WTO notifications for 1999, the most recent notification, rice “amber box” support consisted mostly of marketing loan benefits, followed by smaller amounts for commodity loan interest subsidies (table 2). Rice marketing loan benefits continued to rise in crop years 2000/01, 2001/02 and 2002/03 because of declining market prices (table 3). Other support, such as PFC payments, are notified as “green box.” Crop insurance and market loss assistance payments were reported as “amber box” non-commodity specific support but were not counted in the AMS because of the non-commodity specific “*de minimis*” exemption.

Projected Income Support from the 2002 Farm Act

A crucial question is whether income support for rice will increase substantially under the new Act.⁹ To determine whether income support expenditures will increase, it is necessary to project

⁸ Items that contributed most to the U.S. AMS in 1998 were price supports for dairy, sugar, and peanuts and marketing loan benefits from cotton, oilseeds, and other grains.

⁹ As mentioned previously, the *Farm Security and Rural Investment Act of 2002* caused concern globally, as many countries wondered whether the U.S. would continue to meet its current WTO AMS commitments. However, the new Act contains a provision that assures that the United States will not exceed its WTO limits. Should the need arise, a circuit breaker provision requires the U.S. Secretary of Agriculture to adjust expenditures to meet URAA domestic support ceilings.

these expenditure levels under the 2002 Farm Act and compare them to levels encountered with the 1996 Farm Act.¹⁰

Based on the 2003 USDA baseline projections, *USDA Agricultural Baseline Projections to 2012*, rice prices are projected to remain low relative to the loan rate through 2007 (USDA, 2003a). Rice prices are projected to be \$3.82 per cwt. in 2003 and rise slightly to \$4.18 per cwt. in 2007, compared to a loan rate of \$6.50 per cwt. during the 2003-07 period. Consequently, support through marketing loan benefits and counter-cyclical payments can be expected to be strong.

Non-recourse Marketing Assistance Loans--The new Act calls for a continuation of non-recourse marketing assistance loans. Their use is intended to minimize potential loan forfeitures and subsequent government accumulation of stocks. Under the 2002 Farm Act the loan rate remains at \$6.50 per hundredweight, unchanged from the 1996 Farm Act, with differentiation for grain length (table 2).

Rice producers may repay the loan at the lower of the loan rate plus accrued interest or the adjusted world price (AWP) computed on a weekly basis. If the producer repays the loan at an adjusted world market price, the difference between the loan rate and loan repayment rate is referred to as a marketing loan gain and is considered a benefit to the producer. Any accrued interest on the loan is waived.

Producers may also decide to receive a loan deficiency payment instead of obtaining a loan. This would occur when the announced world price is lower than the commodity loan rate. The LDP rate is the amount the loan rate exceeds the adjusted world market price.

Marketing loan benefits for rice over the life of the 2002 Farm Act, 2002-07, are projected to average \$603.5 million with a range of \$545.9 million to \$685.8 million (table 5). These projections reflect an adjusted world price projected to be less than the U.S. loan rate. Projections of marketing loan benefits equal the U.S. loan rate of \$6.50 per cwt. less the adjusted

¹⁰ More detailed information about the 2002 Farm Act can be found on the following website: (<http://www.ers.usda.gov/features/farbill/>).

world price multiplied by the projected annual production. In comparison, marketing loan benefits during the 1996 Farm Act averaged \$348 million during 1996-2002 with a range of \$0 to \$714 million (table 3).

Projected Marketing Loan Benefits under the 2002 Farm Act, 2002-07

<u>Variable</u>	<u>Years</u>					
	2002 1/	2003 2/	2004 2/	2005 2/	2006 2/	2007 2/
Loan rate (\$/cwt.)	6.50	6.50	6.50	6.50	6.50	6.50
Adjusted world price (\$/cwt.)	3.25	3.60	3.71	3.82	3.93	4.05
LDP rate (\$/cwt.)	3.25	2.90	2.79	2.68	2.57	2.45
Production (million cwt.)	211.0	215.4	217.8	219.5	221.2	222.8
<u>Marketing loan Benefits</u>	<u>685.8</u>	<u>624.7</u>	<u>607.7</u>	<u>588.3</u>	<u>568.5</u>	<u>545.9</u>

1/ Estimates from 4/10/03 WASDE (USDA, 2003 c).

2/ Projections from USDA baseline (USDA, 2003 a).

Direct Payments—Direct payments for rice are available to eligible owners of rice base acres under the 2002 Farm Act. An annual agreement must be signed in order to receive these payments. Direct payments for rice are \$2.35 per cwt. for each year, 2002-2007 (table 4). These payments are based on rice base acres, not current production and are paid on 85 percent of the base acres.¹¹ Base acres for 2002 are 4,139 and are assumed to remain constant through 2007.¹²

¹¹ A question that has been raised is whether the ability to update base acres provides an incentive to continue increasing acres planted to this crop to capture benefits under future rice programs.

¹² **Base Acres**—Under the 2002 Act, landowners were able to update base acres if they desired. One of two choices must be made. 1) Update the rice base acres to capture a 4-year average of planted acreage plus “prevented from planting” for the crop years 1998-2001. 2) Use 2002 production flexibility contract payment acres as the new base for rice and add oilseed bases using a 4-year average of planted acreage plus “prevented from planting” for individual oilseeds during crop years 1998-2001. The aggregate U.S. rice base is not likely to change much because the existing base is larger than the average U.S. rice planted area for 1998-2001.

Payment acres—Payment acres for either direct payments or counter-cyclical payments are equal to 85 percent of the base acres, which may or may not have been updated. Payment acres for the 1996 Fair Act were also 85 percent of the contract acres or base acres.

Program yield—Rice payment yields for direct payments are not changed from those used in the 1996 Act. However, the rice payment yields for counter-cyclical payments may be updated during the signup period with one of the following two choices: 1). Add to program yields 70 percent of the difference between program yields for the 2002 crop and the farm’s average yields for the 1998-2001, or 2). Use 93.5 percent of the 1998-2001 average

Payment yield for 2002 is 4,814 lbs. per acre and is assumed to remain constant through 2007. Direct payments from the 2002 Farm Act are projected to be \$398 million annually, 2002-2007 (table 5). Production flexibility contract payments averaged \$425.9 million annually for the 1996 Farm Act, 1996-2002 with a range of \$347.2 million to \$479.3 million (table 3). Consequently, the direct payments for rice under the 2002 Farm Act may average about \$ 28 million less than the 1996 Farm Act's production flexibility payments, suggesting a reduction in "green box" support with the 2002 Farm Act from direct de-coupled payments.

Projected Annual Direct Payments under the 2002 Farm Act, 2002-2007

$$\begin{array}{l} \text{Payment Rate} \quad \text{Payment Acres} \quad \text{Payment Yield} \\ (\$2.35/\text{cwt.} * 3.518 \text{ million acres} * 4,814 \text{ lbs./acre}) = \$398.0 \text{ million} \end{array}$$

Counter-Cyclical Payments--are made to owners of a rice base when the effective price is less than the rice target price of \$10.50 per hundredweight (table 4). The effective price is equal to the sum of 1) the higher of the national average farm price for the marketing year, or the national loan rate for the commodity and 2) the direct payment rate for the commodity. The counter-cyclical payment for a farmer equals the product of the payment rate, the payment acres, and the payment yield. Some producers may view these payments to be risk reducing.

Based on price projections from the baseline, *USDA Agricultural Baseline Projections to 2012*, the effective price is expected to be less than the \$10.50 target price during the 2002 Farm Act and the farm price is expected to be below the loan rate. Consequently, the maximum counter-cyclical payment rate per year, \$1.65 per cwt., is used as the payment rate. The payment acres are expected to remain virtually unchanged at 3.518 million acres. The payment yield is expected to increase by about 872 lbs./acre or 18 percent to 5,686 lbs./acre for 2002 through 2007.

The annual counter-cyclical payment for rice is projected to be about \$330 million during 2002-2007 (table 5), compared to an average annual *ad hoc* MLA payment made in 1998-2001 of \$391 million (table 3). Based on these projections, annual counter-cyclical payments for rice are

yields. If there is a year when the actual yield is less than the county average, the yield will be 75 percent of the county average. The expectation that yields may be updated under future farm legislation could create an incentive for increasing yields.

expected to average somewhat less than average *ad hoc* MLA payments for rice. Implications for the AMS will depend on how CCPs are notified to the WTO.¹³

Projected Maximum Annual Counter-Cyclical Payments under the 2002 Farm Act, 2002-2007

<u>Payment Rate</u>	<u>Payment Acres</u>	<u>Payment Yield</u>
(2002 Farm Act \$1.65/cwt. * 3.518 million acres * 5,686 lbs./acre)		= \$330.1 million

Doha Development Agenda and Global Domestic Support for Rice

During November 2001, more than 140 WTO member nations agreed to launch a new round of multilateral trade negotiations. These negotiations, called the Doha Development Agenda, seek to reduce and possibly phase out all forms of export subsidies, improve market access, and reduce trade-distorting domestic support. These upcoming negotiations could expand global markets and reduce trade barriers. An agreement on the modalities for cuts in farm subsidies, tariffs, and export subsidies was to have been completed by March 31, 2003, but this has been delayed.

Reducing the AMS for agriculture with the URAA had a limited effect on rice production in developing Asian countries, which account for the bulk of global rice production. Two reasons account for this limited effect. First, the URAA allowed developing countries “special and differential” exemptions for certain input and investment subsidies, which cover most programs used to support rice production in these countries. Second, trade-distorting domestic support measures are not counted in a developing country’s AMS if the commodity’s “amber box” expenditure does not exceed 10 percent of the commodity’s value of production, the developing country “*de minimis*” provision. Furthermore, some developed countries, such as Japan, have experienced limited production effects due mostly to policy “re-instrumentation”.

The new round of negotiations have brought attention to the trade-distorting domestic support policies of developed countries, such as the EU, Japan, and the U.S. Developed countries

¹³ As of May 5, 2003, the United States has not notified CCPs to the WTO. It is not clear how CCPs will be notified to the WTO.

account for virtually all “amber” box domestic support expenditures, as well as most export subsidies. Currently, the U.S. AMS ceiling is \$19.1 billion compared to the EU’s AMS ceiling of about \$60 billion and Japan’s ceiling of \$30 billion. Given the increased level of global concern over the potential for increased U.S. domestic support, how does the U.S. domestic support for rice compare to other member countries rice support?

Countries with “amber box” expenditures on rice in 1998 included Brazil, Colombia, the EU, Mexico, Philippines, South Korea, Thailand, Turkey, the United States, and Venezuela (table 6).

¹⁴ However, only Colombia, the EU, Mexico, South Korea, and Thailand included rice in their AMS (table 6). Rice comprised a large portion of the AMS for South Korea and Thailand, nearly 80 percent, but rice was small or non-existent in 1998 for the EU, Japan, or the United States. “Amber box” support for countries such as Brazil, the EU, South Korea, and Thailand exceeded U.S. levels for 1998. However, because of declining prices, “amber box” support for U.S. rice rose in 1999 (table 7).

Based on the current negotiations of the Doha Development Agenda, future domestic support appears focused on two types: exempt (no or minimal trade distortion) support and reduced non-exempt (production and trade-distortion) support. Some proposals call for further reduction of the AMS with implementation to occur over a number of years. Other proposals call for commodity specific reductions in “amber box” policies. Some proposals are calling for the reduction of the “*de minimis*” provision. Lastly, there is a call for the reduction of the “blue box” and merger with the AMS.

Scenario analysis suggests that reductions in marketing loan benefits could affect U.S. rice producers and rice sector revenues (table 8). Impacts are sensitive to both sizes of reduction and implementation period. If rice’s marketing loan benefits are reduced by 25 percent from projected levels for 2002-07 and assuming no change in production or price, average annual revenue to the U.S. rice sector could decline by 4 percent with a 6-year implementation period or by 7 percent with a no phase-in period (table 8, scenario I). Alternatively, if rice’s marketing loan benefits are reduced by 50 percent from projected levels for 2002-07 and assuming no

change in production or price, average annual revenue to the U.S. rice sector could decline by 8 percent with a 6-year implementation period or by 14 percent with a no phase-in period (table 8, scenario II). Lastly, if rice's marketing loan benefits are reduced by 100 percent from projected levels for 2002-07 and assuming no change in production or price, average annual revenue to the U.S. rice sector could decline by 15 percent with a 6-year phase-in period or by 27 percent with a no phase-in period (table 8, scenario III).

Summary and Conclusions

Government support to U.S. rice producers represents a major source of revenue, comprising 50 percent or greater of sector revenue in each of the past four crop years, 1999-2002. The 1996 Farm Act focused on planting flexibility with a reduced safety net. Government support was in the form of marketing loan benefits, de-coupled production flexibility contract payments, crop and revenue insurance subsidies, *ad hoc* market loss assistance payments, and export assistance programs. The 2002 Farm Act continues programs from the 1996 Farm Act with direct payments replacing production flexibility contract payments and counter-cyclical payments replacing *ad hoc* market loss assistance payments. Crop and revenue insurance subsidies continue under different legislation.

Rice contributed \$435 million to the U.S. AMS in 1999 with marketing loan benefits accounting for most of these "amber box" expenditures. Marketing loan benefits continued to rise in crop years 2000/01, 2001/02, and 2002/03 because of declining market prices.

Assuming continued low prices, income support from the 2002 Farm Act is expected to exceed support provided during the years of 1996-02. Projected annual average total support is \$1.3 billion for 2002-07 compared to an annual average of \$1.0 billion for 1996-02. Marketing loan benefits are expected to account for the rise in expenditures with slight declines in direct payments and counter-cyclical payments. Projected annual average payments equal 60 percent of total sector revenue in 2002-07 compared to 43 percent in the prior period of 1996-02.

¹⁴ Japan converted its rice support from "amber box" to "blue box" in 1998.

Support for the U.S. rice sector is likely to become highly scrutinized due to the U.S.'s AMS commitments under the WTO. The current AMS for the U.S. is \$19.1 billion and will remain at this level until a new WTO agreement is reached. A new WTO agreement is expected to further reduce trade-distorting domestic support levels in either an aggregate or commodity specific approach. Hypothetical scenarios of reduced marketing loan benefits suggest that projected annual average revenue (2002-07) for the U.S. rice sector could decline by 4 to 27 percent. With less government support, rice production could decline in the U.S. as well as other countries such as Brazil, the EU, Japan, South Korea, and Thailand.

References

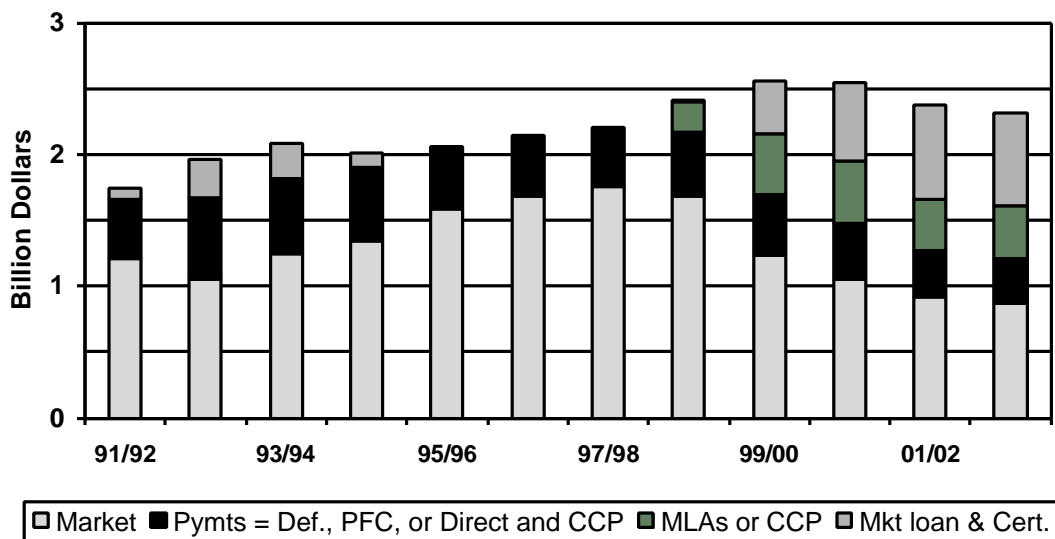
- Childs, Nathan W. "Rice: Background and Issues for Farm Legislation." Electronic Outlook Report from the Economic Research Service. (www.ers.usda.gov). RCS-0601-01, USDA/ERS. July 2001.
- Childs, Nathan W. and Linwood Hoffman. "Upcoming World Trade Organization negotiations: Issues for the U.S. Rice Sector." *Rice Situation and Outlook Yearbook*. USDA/ERS. RCS-1999, November 1999.
- Cramer, Gail L., James M. Hansen, and Kenneth B. Young. "The United States and World Rice Industries." Chapter 6 in *Competition in Agriculture: The United States in the World Market*. Haworth Press Binghamton, New York, 2000 a.
- Cramer, Gail L., Kenneth B. Young, and Eric J. Wailes. "Rice Marketing." Eds. *The U.S. Rice Industry*. John Wiley and Sons, 2000 b.
- Cramer, Gail L., Eric J. Wailes, and James M. Hansen. "Impact of Rice Tariffication on Japan and the World Rice Market," *American Journal of Agricultural Economics*. Vol. 81, 1999.
- Hoffman, Linwood A. and Erik Dohlman. "The New Agricultural Trade Negotiations: Background and Issues for the Coarse Grain Sector," *Feed Situation and Outlook Yearbook*. FDS-2001, April 2001, pp. 25-45.
- Setia, Parveen, Nathan Childs, Eric Wailes, and Janet Livezey. *The U.S. Rice Industry*. Ag. Econ. Rpt. No. 700, USDA/ERS. September 1994.
- Schnepf, R. D. and B. Just. *Rice: Background for 1995 Farm Legislation*. Ag. Econ. Rpt. No. 713. USDA/ERS. April 1995.
- Song, Jooho and Colin A. Carter. "Rice Trade Liberalization and Implications for U.S. Policy." *American Journal of Agricultural Economics*. Vol. 78, November 1996.

- Sumner, Daniel A. and Hyunnok Lee. "Assessing the Effects of the WTO Agreement on Rice Markets: What Can We learn from the First Five Years?" A paper presented at the Allied Social Sciences Association Conference, Boston, Massachusetts. January 2000.
- U.S. Department of Agriculture. Economic Research Service. *USDA Agricultural Baseline Projections to 2012*, Staff Report WAOB-2003-1, February 2003 a. p. 47.
- U.S. Department of Agriculture, Farm Service Agency. *Fact Sheet: Rice-Summary of 2002-2007 Program*. April 2003 b.
(<http://www.fsa.usda.gov/pas/publications/facts/html/rice03.htm>)
- U.S. Department of Agriculture, Office of the Chief Economist. AMS, ERS, FSA, and FAS. *World Agricultural Supply and Demand Estimates*. WASDE-397. April 10, 2003 c.
- U.S. Department of Agriculture, Economic Research Service. Farm and Commodity Policy Briefing Room. "The 2002 Farm Bill: Provisions and Economic Implications." May 2002 a. (<http://www.ers.usda.gov/features/farbill/>)
- U.S. Department of Agriculture, Foreign Agriculture Service. "The U.S. WTO Agricultural Proposal." July 25, 2002 b. (<http://www.fas.usda.gov/itp/wto/proposal.htm>).
- U.S. Department of Agriculture (c), Economic Research Service. Farm and Commodity Policy Briefing Room. "Crop and Revenue Insurance."
(<http://www.ers.usda.gov/briefing/FarmPolicy/insure.htm>).
- U.S. Department of Agriculture (d), Economic Research Service. Farm and Commodity Policy Briefing Room. Farm and Commodity Policy Briefing Room. "Glossary of Policy Terms." (<http://www.ers.usda.gov/briefing/WTO/Glossaries.htm>).
- U.S. Department of Agriculture (e), Economic Research Service. WTO Briefing Room. Glossary. "Definition of terms used in this briefing room." and "A Glossary of Trade Terms." (<http://www.ers.usda.gov/briefing/WTO/Glossaries.htm>)
- U. S. Department of Agriculture (f), Economic Research Service. *Rice Situation & Outlook*. Various issues.
- U.S. Department of Agriculture (g), Foreign Agriculture Service. "Export Programs."
(www.fas.usda.gov/export.html)
- Wailes, Eric J. "Trade Liberalization in Rice." A Paper Presented at the Global Agricultural Trade in the New Millennium Conference. New Orleans, Louisiana, May 2000.
- Westcott, Paul and J. Michael Price. *Analysis of the U.S. Commodity Loan Program with Marketing Loan Provisions*. Ag. Econ. Rpt. No. 801. USDA/ERS, April 2001.

Westcott, Paul, C. Edwin Young, and J. Michael Price. *The 2002 Farm Act: Provisions and Implications for Commodity Markets*. Ag. Inf. Bull. No. 778. USDA/ERS, November 2002.

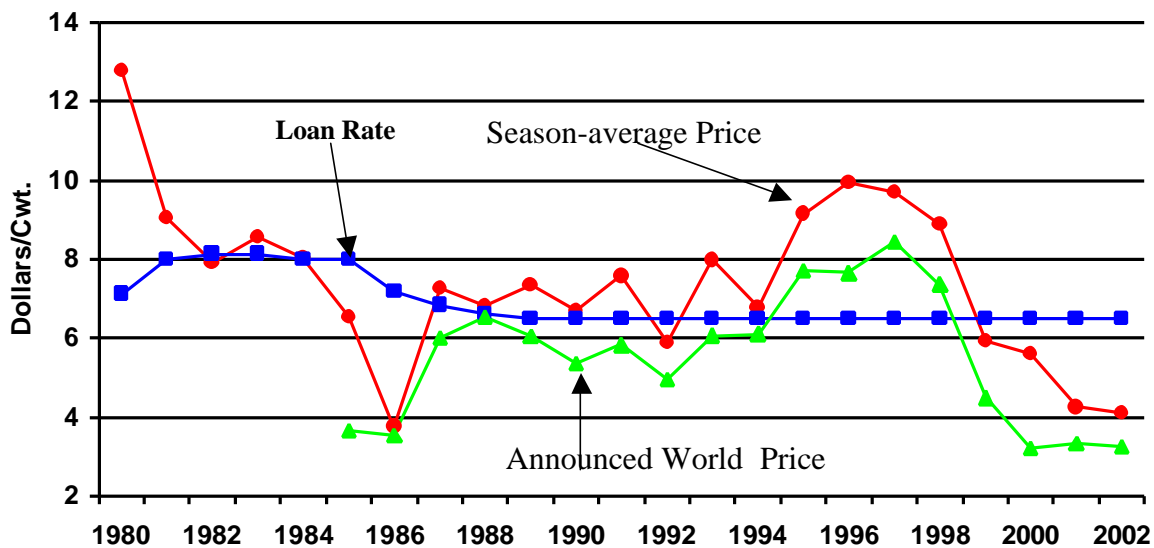
Young, C. Edwin, Monte L. Vandever, and Randall D. Schnepf. "Production and Price Impacts of U.S. Crop Insurance Programs," *American Journal of Agricultural Economics*. Vol. 83, #5, 2001. pp. 1196-1203.

Figure 1: U.S. Rice Sector: Sources of Revenue, 1991/92—2002/03



August-July marketing year. 2002/03 projected.
 Source: Economic Research Service and Farm Service Agency, USDA.

Figure 2: Price Received by U.S. Producers, Loan Rate, and Announced



2001=estimate. 2002= projection as of 4/10/03
 Source: Economic Research Service, USDA.

Table 1. Federal Crop Insurance Experience for U.S. Rice, 1995--2001.

Year	Planted Area	Insured Area	Percent of participation	Total Premium	Premium Subsidy	Producer Premium	Indemnity	Net Indemnity
	Million Acres		Percent	Million Dollars				
1995	3.1	3	96.8	11.9	8.9	3.1	5.4	2.3
1996	2.8	1.9	67.9	10.1	7.4	2.7	1.6	-1.1
1997	3.1	1.7	54.8	12.2	8.5	3.7	8.5	4.8
1998	3.3	2	60.6	16.5	11.7	4.7	14.1	9.4
1999	3.5	2.6	74.3	32.1	19.4	12.6	53.7	41.1
2000	3.1	2.3	74.2	20.4	11.9	8.4	11.7	3.3
2001	3.3	2.5	75.8	19.8	13.4	6.4	13.8	7.4
2002	3.2	2.4	75.0	19.3	12.5	6.8	14.8	8

Source: USDA, Economic Research Service

Table 2. U.S. Amber Box Support for Rice and the AMS, 1995-99.

Crop Year	Amber Box Support	Value of U.S. Rice Production	5 Percent of Rice's Production Value	Rice's Contribution to U.S. Total AMS	U.S. Total AMS Commitment
	Mil. U.S. Dollars				Bil. U.S. Dollars
1995	11.6	1,514.3	75.7	0.0	23.1
1996	5.8	1,687.4	84.4	0.0	22.3
1997	6.4	1,756.1	87.8	0.0	21.5
1998	20.8	1,686.6	84.3	0.0	20.7
1999 ^{1/}	435.0	1,231.2	61.6	435.0	19.9

^{1/} 1999 is the latest WTO notification.

Source: WTO country notifications.

Table 3. U.S. Rice Sector Income Support Payments under the 1996 Farm Act, 1996-2002.

	1996	1997	1998	1999	2000 ^{1/}	2001 ^{1/}	2002 ^{1/}
	Million Dollars						
Production Flexibility Contract Payments	455.3	448.4	479.3	465.6	433.1	352.3	347.2
Market Loss Assistance	0.0	0.0	238.0	464.7	463.8	397.5	0.0
Loan Deficiency Payments	0.0	0.0	1.0	160.7	278.8	309.1	263.8
Marketing Loan Gains	0.0	0.0	13.1	183.0	150.3	199.1	142.3
Certificate Gains	0.0	0.0	0.0	57.0	169.3	205.5	303.3
Total Payments	455.3	448.4	731.4	1,331.0	1,495.3	1,463.5	1,056.6
Value of Production	1,690.3	1,756.1	1,687.0	1,231.2	1,050.0	914.9	864.9
Total Sector Revenue	2,145.6	2,204.5	2,418.4	2,562.2	2,545.3	2,378.4	1,921.5

^{1/} Estimated based on 3/11/03 WASDE.

Source: Farm Service Agency, USDA

Table 4. Selected Policy Parameters Under the 2002 Farm Act

Commodity	Target prices		Direct payment rates	Loan rates	
	2002-2003	2004-2007	2002-07	2002-2003	2004-2007
Rice (\$/cwt.)	10.50	10.50	2.35	6.50	6.50
Wheat (\$/bu.)	3.86	3.92	0.52	2.80	2.75
Corn (\$/bu.)	2.60	2.63	0.28	1.98	1.95
Grain sorghum (\$/bu.)	2.54	2.57	0.35	1.98	1.95
Barley (\$/bu.)	2.21	2.24	0.24	1.88	1.85
Oats (\$/bu.)	1.40	1.44	0.024	1.35	1.33
Upland cotton (\$/lb.)	0.724	0.724	0.0667	0.52	0.52
Soybeans (\$/bu.)	5.80	5.80	0.44	5.00	5.00
Peanuts (\$/ton)	495	495	36	355	355

Table 5. Projected U.S. Rice Sector Income Support Payments under the 2002 Farm Act, 2002-07.

	2002	2003	2004	2005	2006	2007
	Million Dollars					
Direct Payments	398.0	398.0	398.0	398.0	398.0	398.0
Counter-Cyclical Payments	330.1	330.1	330.1	330.1	330.1	330.1
Marketing Loan Benefits ^{1/}	685.8	624.7	607.7	588.3	568.5	545.9
Total Payments	1,413.9	1,352.8	1,335.8	1,316.4	1,296.6	1,274.0
Value of Production	864.9	822.8	845.1	867.0	895.9	931.3
Total Sector Revenue	2,278.8	2,175.6	2,180.9	2,183.4	2,192.5	2,205.3

1/ Projections for marketing loan benefits relied on 4/10/03 WASDE for 2002 and the USDA baseline for 2003-07.

Table 6. Amber and Blue Box Support for Rice by WTO Member Country, 1998.

	Amber Box Expenditures	Amber Box Expenditures minus <i>de minimis</i> exemption	Rice Contribution to the AMS	Blue Box Expenditures	Total Amber and Blue Box Expenditures
	----Mil. U.S. Dollars----		Percent	----Mil. U.S. Dollars----	
Brazil	26.4	0.0	0.0	0.0	26.4
Chile	0.0	0.0	0.0	0.0	0.0
Colombia	4.7	4.7	1.2	0.0	4.7
European Union	478.0	478.0	0.1	89.0	567.0
Japan	0.0	0.0	0.0	392.0	392.0
Mexico	5.0	5.0	0.0	0.0	5.0
Philippines	8.0	0.0	0.0	0.0	8.0
South Korea	1,077.0	1,077.0	77.4	0.0	1,077.0
Thailand	394.0	394.0	78.9	0.0	394.0
Turkey	13.3	0.0	0.0	0.0	13.3
United States	20.8	0.0	0.0	0.0	20.8
Venezuela	0.0	0.0	0.0	0.0	0.0
Total	2,027.2	1,958.7		481.0	2,508.2

Source: WTO country notifications.

Table 7. Amber box Support for Rice by WTO Member Country, 1995-99.

	1995	1996	1997	1998	1999
Countries	Million U.S. Dollars				
Brazil	109.9	46.7	21.7	26.4	N/N
Chile	0.3	0.3	0.2	0.0	0.0
Colombia	15.0	0.0	3.0	5.0	4.0
European Union	653.0	649.0	576.0	478.0	391.1
Japan	27,597.0	22,705.0	19,540.0	0.0	0.0
Mexico	6.0	3.0	3.0	5.0	N/N
Philippines	10.0	33.0	21.0	8.0	94.2
South Korea	2,614.0	2,374.0	1,981.0	1,077.0	1,264.0
Thailand	352.0	498.0	299.0	394.0	N/N
Turkey	0.0	9.5	11.1	13.3	12.0
United States	11.6	5.8	6.4	20.8	435.0
Venezuela	529.0	161.0	227.0	N/N	N/N
Total	31,897.8	26,485.3	22,689.4	2,027.5	2,200.3

N/N = WTO was not notified.

Source: WTO, TN/AG/S4, March 20, 2002 and WTO country notifications.

Table 8. Effects of Alternative Marketing Loan Benefit Reduction Scenarios to the U.S. Rice Sector.

Scenarios	Years						Avg. 2002-07
	2002	2003	2004	2005	2006	2007	
	Million U.S. Dollars						
Projected Marketing Loan Benefits ^{1/}	685.8	624.7	607.7	588.3	568.5	545.9	603.5
Scenario I. Reduce Projected Marketing Loan Benefits for 2002-07 by 25 %.							
A. Phased in over 6 years.							
Reduced marketing loan benefits	657.3	572.7	531.9	490.4	450.3	409.4	518.7
Reduction to Projected MLBs	28.5	52.0	75.8	97.9	118.2	136.5	84.8
B. No phase-in period.							
Reduced marketing loan benefits	514.4	468.5	455.8	441.2	426.4	409.4	452.6
Reduction to Projected MLBs	171.5	156.2	151.9	147.1	142.1	136.5	150.9
Scenario II. Reduce Projected Marketing Loan Benefits for 2002-07 by 50 %.							
A. Phased in over 6 years.							
Reduced marketing loan benefits	628.7	520.6	455.8	392.3	331.7	273.0	433.7
Reduction to Projected MLBs	57.1	104.1	151.9	196.0	236.8	273.0	169.8
B. No phase-in period.							
Reduced marketing loan benefits	342.9	312.35	303.85	294.15	284.25	272.95	301.7
Reduction to Projected MLBs	342.9	312.35	303.85	294.15	284.25	272.95	301.7
Scenario III. Reduce Projected Marketing Loan Benefits for 2002-07 by 100%.							
A. Phased in over 6 years.							
Reduced marketing loan benefits	571.5	416.5	303.9	196.1	94.8	0.0	263.8
Reduction to Projected MLBs	114.3	208.2	303.8	392.2	473.7	545.9	339.7
B. No phase-in period.							
Reduced marketing loan benefits	0	0	0	0	0	0	0.0
Reduction to Projected MLBs	685.8	624.7	607.7	588.3	568.5	545.9	603.5

^{1/} Taken from table 5.