Evaluation of Alternative Base Periods for a Rice Counter Cyclical Payment Program and Added AMTA

Briefing Paper 01-6

James W. Richardson Edward G. Smith Abner W. Womack Christy Houston



Agricultural and Food Policy Center Department of Agricultural Economics Texas Agricultural Experiment Station Texas Agricultural Extension Service Texas A&M University

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College Station, TX 77843-2124 Telephone: (979) 845-5913 Fax: (979) 845-3140 Web Site: http://www.afpc.tamu.edu

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Executive Summary

The analysis was completed for one year, namely, 2001 using the FAPRI baseline rice price of \$6.29/cwt. as the mean price for 2001. Risk for price and yields was incorporated into the analysis to appropriately replicate the historical variability for these variables.

The counter cyclical payment (CCP) payments were calculated two ways: national revenue or state revenue. For the national revenue CCP program, payments were assumed to be triggered if total per planted acre market receipts for rice (national planted acre yield times national season average price) was less than the average national planted acre receipts for a particular base period. For the state revenue CCP program, payments were triggered when state planted acre revenue (state planted acre yield times national season average price) was less than the average per planted acre state receipts for a particular base period.

Twelve base periods for a CCP program were evaluated for rice. The base periods were alternative 5 year averages covering the period from 1991-2000 using first the simple average of total planted acre receipts and then using a 5 year Olympic average. The Olympic average ignores the lowest and highest values when calculating the per planted acreage receipts. Six Added AMTA strategies were analyzed assuming that the AMTA rate was incremented \$1, \$1.5, \$2.0, \$2.5, \$3.0, or \$3.5/cwt. over and above the current AMTA of \$2.10/cwt. for 2001. The resulting 18 strategies are summarized in page 3.

Results of the analysis are summarized in terms of the probable impacts of the alternative programs on total receipts per cwt., CCP rate per cwt., and total government costs for rice. Average total receipts per cwt. (page 5) is presented for each of the 18 strategies, assuming either a state triggered CCP or a U.S. triggered CCP program. For the U.S. triggered program, total receipts per cwt. are largest for the Olympic average base calculated over the 1995-99 or 1994-98 periods (\$12.86/cwt.). The base CCP calculated using a simple average of receipts over the 1994-98 period provides the second highest average return at \$12.70/cwt. (It should be noted that total receipt per cwt. is defined here as market receipts plus LDPs plus a \$2.10/cwt. AMTA plus either a CCP or an Added AMTA.)

There is risk associated with total receipts, so probabilities of receipts being less than \$12/cwt. or greater than \$13/cwt. were calculated (page 6). Using the U.S. triggered options, the strategy with the lowest probability of having receipts per cwt. less than \$12 was the Added AMTA of \$3.50/cwt, which added \$3.50 to the existing \$2.10 AMTA. The greatest probability of seeing total receipts per cwt. in excess of \$13/cwt. was achieved using an Olympic average base over the 1995-99 or 1994-98 periods. The CCP program that used a base receipt calculated over the 1994-98 period performed the best of the six simple average options.

The average CCP rates for the 12 options are summarized in page 11. Under the U.S. receipts triggered CCP program, the highest average CCP occurs for the Olympic average 1995-99 and 1994-98 bases (\$2.59/cwt.) and the Simple average 1994-98 base (\$2.44/cwt.) comes in second place. The probability of the CCP less than \$2/cwt. is minimized for these same base period programs. These three base period CCP programs also are associated with the highest probabilities of CCP payments exceeding \$3/cwt. (about 30 percent).

Total government payments to rice in 2001 for LDPs, AMTA and CCPs or Added AMTAs are reported in page 14. Average government costs in 2001 is the greatest when the AMTA is increased by \$3.50/cwt. at \$1.413 billion, followed by the \$3/cwt. Added AMTA at \$1.328 billion. The top three average government cost CCP options are associated with bases calculated using the Olympic average 1995-99 and 1994-98 and the Simple average 1994-98. As a reference point, the FAPRI baseline shows a projected government cost to rice at \$0.839 billion for 2001 with no additional payments other than the \$2.10/cwt. AMTA currently authorized in the Farm Bill.

After extensive discussion with rice leadership, further analysis will focus on the following options:

- CCP with Base calculated using Simple Average 1994-98
- CCP with Base calculated using Olympic Average 1994-98
- CCP with Base calculated using Olympic Average 1995-99
- Added AMTA \$2.00/cwt.
- Added AMTA \$2.50/cwt.
- Added AMTA \$2.75/cwt.
- Mixed strategy which assumes the base AMTA is increased \$0.39/cwt. for a total base AMTA of 2.50/cwt. and repeats each of the 6 strategies above.

18 Alternative Counter Cyclical Payment and Added AMTA Payment Strategies

- Counter Cyclical Payment Strategies

- Simple Average of 1996-2000 market receipts as the base revenue for triggering a CCP
- Simple Average of 1995-1999 market receipts as the base revenue for triggering a CCP
- Simple Average of 1994-1998 market receipts as the base revenue for triggering a CCP
- Simple Average of 1993-1997 market receipts as the base revenue for triggering a CCP
- Simple Average of 1992-1996 market receipts as the base revenue for triggering a CCP
- Simple Average of 1991-1995 market receipts as the base revenue for triggering a CCP
- Olympic Average of 1996-2000 market receipts as the base revenue for triggering a CCP
- Olympic Average of 1995-1999 market receipts as the base revenue for triggering a CCP
- Olympic Average of 1994-1998 market receipts as the base revenue for triggering a CCP
- Olympic Average of 1993-1997 market receipts as the base revenue for triggering a CCP
- Olympic Average of 1992-1996 market receipts as the base revenue for triggering a CCP
- Olympic Average of 1991-1995 market receipts as the base revenue for triggering a CCP

- Added AMTA Payment Strategies

- Add \$1 per cwt. and pay on 85% of a base acre using the state's farm program yield
- Add \$1.5/cwt. and pay on 85% of a base acre using the state's farm program yield
- Add \$2.0/cwt. and pay on 85% of a base acre using the state's farm program yield
- Add \$2.5/cwt. and pay on 85% of a base acre using the state's farm program yield
- Add \$3.0/cwt. and pay on 85% of a base acre using the state's farm program yield
- Add \$3.5/cwt. and pay on 85% of a base acre using the state's farm program yield

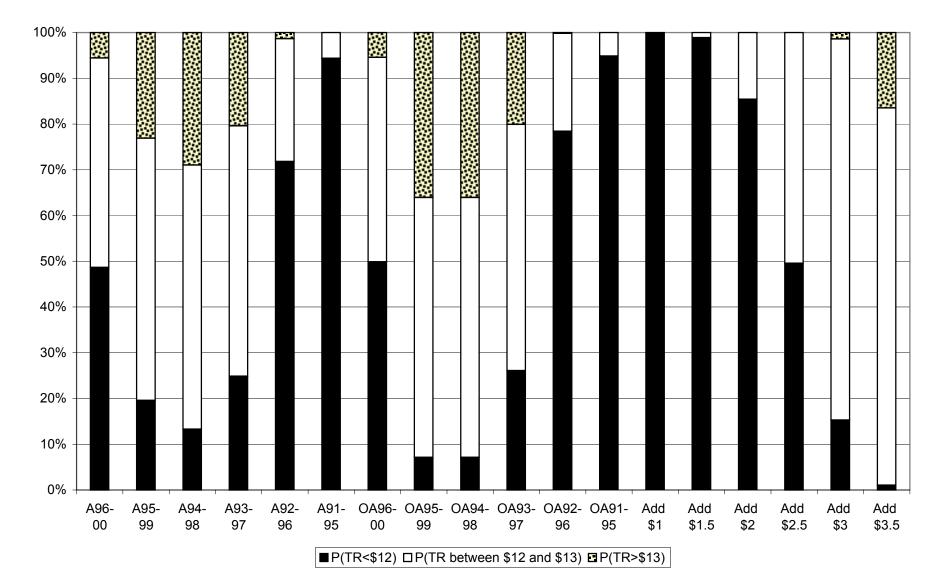
Method of Analysis

- Planted acre cash receipts, by State, 1980-2000
 - State planted acre yield
 - National rice price
 - State planted acre receipts = Yield * National Price
- Base receipts at State level calculated using alternative 5 year periods
 - Simple average 1996-2000, 1995-1999, etc.
 - Olympic average 1996-2000, 1995-1999, etc.
- Monte Carlo Simulation Model
 - Stochastic national price for 2001 based on FAPRI price projection
 - Stochastic state planted acre yields based on historical risk
 - Stochastic state receipts triggered CCPs when state receipts less than trigger for a state
 - AMTA for 2001 and LDP for 2001 calculated per farm bill specifications
- Sensitivity Analysis
 - Trigger levels analyzed
 - ► 100% of the base cash receipt
 - ► 95% of the base cash receipt
 - ► 90% of the base cash receipt
- Results reported in risk context for each strategy
 - Average levels of total receipts/acre, where total receipts is defined as the sum of cash receipts, LDP's, AMTA in the 2001 farm program, and either CCP or Added AMTA
 - Probability of total receipts less than \$12/acre
 - Probability of total receipts greater than \$13/acre
 - Average level of CCP and Added AMTA/cwt.
 - Probability of the CCPs or Added AMTA being less than \$2/cwt.
 - Probability of the CCPs or Added AMTA being greater than \$3/cwt.
 - Probability of the CCPs or Added AMTA being between \$2 and \$3/cwt.

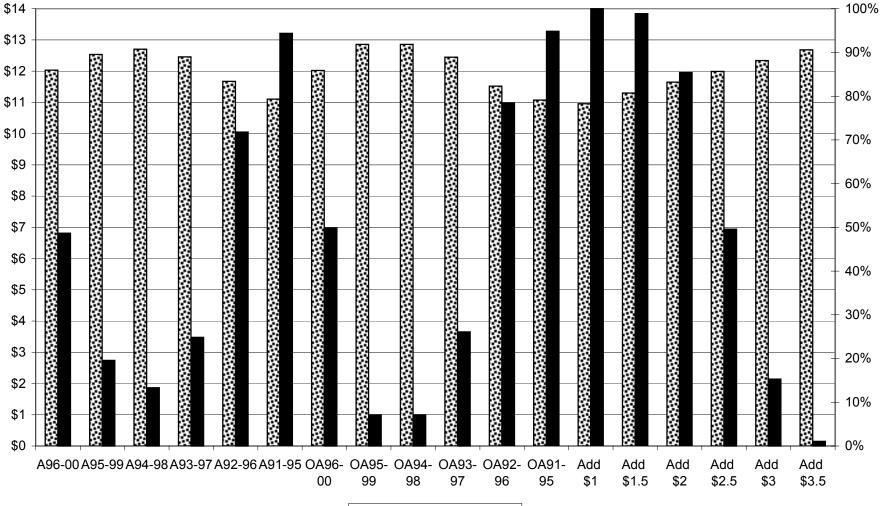
| Summary of Total Receipts to Rice per Cwt for Alternative Specifications of Counter Cyclical Payment Base and |
|---|
| Added AMTA Payment Rates |

| <u>ب</u> | Texas A | rkansas | California | Louisiana | Mississippi | Missouri | US |
|--|-----------------------------|----------------------|----------------|-------------|-------------|-----------------|----------------|
| Average Total Receipts per | | | oumorrida | 200.010.10 | eeieeipp: | meeeun | ••• |
| Avg 96-00 | 12.57 | 12.07 | 11.45 | 12.35 | 12.04 | 12.28 | 12.03 |
| Avg 95-99 | 13.00 | 12.56 | 12.07 | 12.92 | 12.57 | 12.82 | 12.53 |
| Avg 94-98 | 13.18 | 12.66 | 12.45 | 13.01 | 12.78 | 12.87 | 12.70 |
| Avg 93-97 | 12.95 | 12.25 | 12.59 | 12.82 | 12.44 | 12.46 | 12.46 |
| Avg 92-96 | 12.33 | 11.50 | 11.79 | 12.02 | 11.66 | 11.67 | 11.67 |
| Avg 91-95 | 11.79 | 10.89 | 11.53 | 11.51 | 11.12 | 11.13 | 11.11 |
| - | 12.47 | 12.01 | 11.38 | 12.35 | 12.07 | 12.26 | 12.02 |
| Olym Avg 96-00 | | | | | | | 12.02 12.86 |
| Olym Avg 95-99 | 13.19 | 12.82 | 12.42 | 13.18 | 12.95 | 13.11 | |
| Olym Avg 94-98 | 13.19 | 12.82 | 12.42 | 13.18 | 12.95 | 13.11 | 12.86 |
| Olym Avg 93-97 | 12.82 | 12.13 | 12.65 | 12.86 | 12.39 | 12.42 | 12.45 |
| Olym Avg 92-96 | 12.12 | 11.24 | 11.90 | 11.97 | 11.49 | 11.48 | 11.52 |
| Olym Avg 91-95 | 11.82 | 10.80 | 11.68 | 11.46 | 11.12 | 11.06 | 11.07 |
| Added \$1 | 11.54 | 10.95 | 10.42 | 11.34 | 10.86 | 11.21 | 10.96 |
| Added \$1.5 | 11.89 | 11.28 | 10.80 | 11.71 | 11.16 | 11.58 | 11.30 |
| Added \$2 | 12.25 | 11.61 | 11.19 | 12.07 | 11.47 | 11.95 | 11.65 |
| Added \$2.5 | 12.60 | 11.94 | 11.57 | 12.44 | 11.77 | 12.32 | 11.99 |
| Added \$3 | 12.96 | 12.26 | 11.96 | 12.80 | 12.08 | 12.69 | 12.34 |
| Added \$3.5 | 13.31 | 12.59 | 12.34 | 13.16 | 12.38 | 13.06 | 12.68 |
| Probability of Total Receipts | s per Planted Acre Le | ess than \$1 | 2/CWT | | | | |
| Avg 96-00 | . 24% | 46% | 85% | 31% | 49% | 34% | 49% |
| Avg 95-99 | 6% | 21% | 49% | 4% | 18% | 11% | 20% |
| Avg 94-98 | 3% | 16% | 21% | 4% | 10% | 6% | 13% |
| Avg 93-97 | 7% | 35% | 16% | 8% | 25% | 28% | 25% |
| Avg 92-96 | 36% | 79% | 65% | 48% | 74% | 75% | 72% |
| Avg 91-95 | 64% | 99% | 80% | 80% | 96% | 96% | 94% |
| Olym Avg 96-00 | 29% | 51% | 88% | 32% | 47% | 35% | 50% |
| Olym Avg 95-99 | 3% | 8% | 22% | 3% | 4% | 3% | 7% |
| Olym Avg 94-98 | 3% | 8% | 22% | 3% | 4% | 3% | 7% |
| Olym Avg 93-97 | 11% | 41% | 14% | 7% | 28% | 29% | 26% |
| Olym Avg 92-96 | 45% | 92% | 58% | 55% | 81% | 82% | 78% |
| Olym Avg 91-95 | 43 <i>%</i> 61% | 92 % 99% | 71% | 83% | 96% | 97% | 95% |
| Added \$1 | 87% | 100% | 100% | 97% | 100% | 88% | 100% |
| | 62% | 95% | 99% | 78% | 100% | 74% | 99% |
| Added \$1.5 | | | | | | | |
| Added \$2 | 33% | 80% | 92% | 42% | 92% | 50% | 85% |
| Added \$2.5 | 10% | 52% | 77% | 14% | 67% | 33% | 50% |
| Added \$3 | 0% | 31% | 56% | 1% | 43% | 17% | 15% |
| Added \$3.5 | 0% | 13% | 27% | 0% | 19% | 13% | 1% |
| | | | | | | | |
| Probability of Total Receipts Avg 96-00 | s per Planted Acre G 26% | reater than 5% | \$13/CWT 0% | 16% | 4% | 13% | 6% |
| Avg 95-99 | 48% | 23% | 6% | 42% | 24% | 35% | 23% |
| Avg 94-98 | 57% | 28% | 15% | 42 % 50% | 36% | 39% | 29% |
| Avg 93-97 | 47% | 11% | 21% | 35% | 17% | 20% | 20% |
| Avg 92-96 | 18% | 0% | 3% | 6% | 1% | 1% | 20 % |
| Avg 92-90 Avg 91-95 | 4% | 0% | 0% | 0% | 0% | 0% | 0% |
| | | | | | | | |
| Olym Avg 96-00 | 21% | 4% | 0% | 16% | 5% | 13% | 5% |
| Olym Avg 95-99 | 57% | 36% | 14% | 60% | 45% | 58% | 36% |
| Olym Avg 94-98 | 57% | 36% | 14% | 60% | 45% | 58% | 36% |
| Olym Avg 93-97 | 39% | 7% | 25% | 37% | 15% | 19% | 20% |
| Olym Avg 92-96 | 10% | 0% | 4% | 4% | 0% | 0% | 0% |
| 01 1 01 7 - | | 0% | 1% | 0% | 0% | 0% | 0% |
| Olym Avg 91-95 | 5% | | | | | | |
| Added \$1 | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Added \$1 Added \$1.5 | 0% 1% | 0% 0% | 0% | 0% | 0% | 0% | 0% |
| Added \$1 Added \$1.5 Added \$2 | 0% 1% 6% | 0% 0% 0% | 0% 0% | 0% 0% | 0% 0% | 0% 7% | 0% 0% |
| Added \$1 Added \$1.5 | 0% 1% 6% 17% | 0% 0% 0% 0% | 0% 0% 0% | 0% | 0% | 0% 7% 14% | 0% |
| Added \$1 Added \$1.5 Added \$2 | 0% 1% 6% | 0% 0% 0% | 0% 0% | 0% 0% | 0% 0% | 0% 7% | 0% 0% |

Total returns per cwt. Includes market receipts, legislated AMTA payment, Loan Deficiency Payment, Counter Cyclical Payment or Added AMTA payments as specified.



Probability of Total Receipts Per Cwt Being Between \$12 and \$13: US



Average Receipts Per Cwt and Probability of Receiving Less Than \$12 per Cwt for Alternative Counter Cyclical Payment Base Periods or Added AMTAs: U.S.

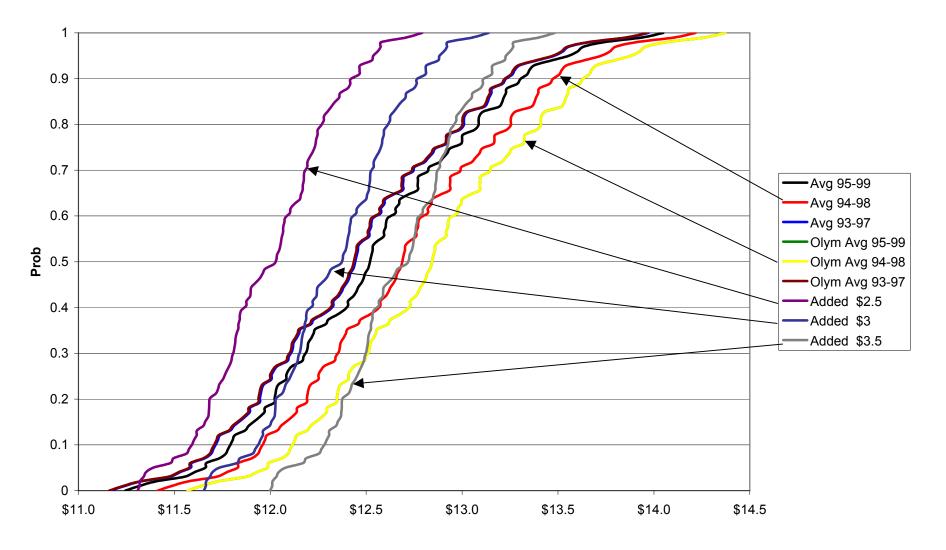
■ \$/Cwt ■ Prob < \$12/CWT

Nine Most Favorable Strategies

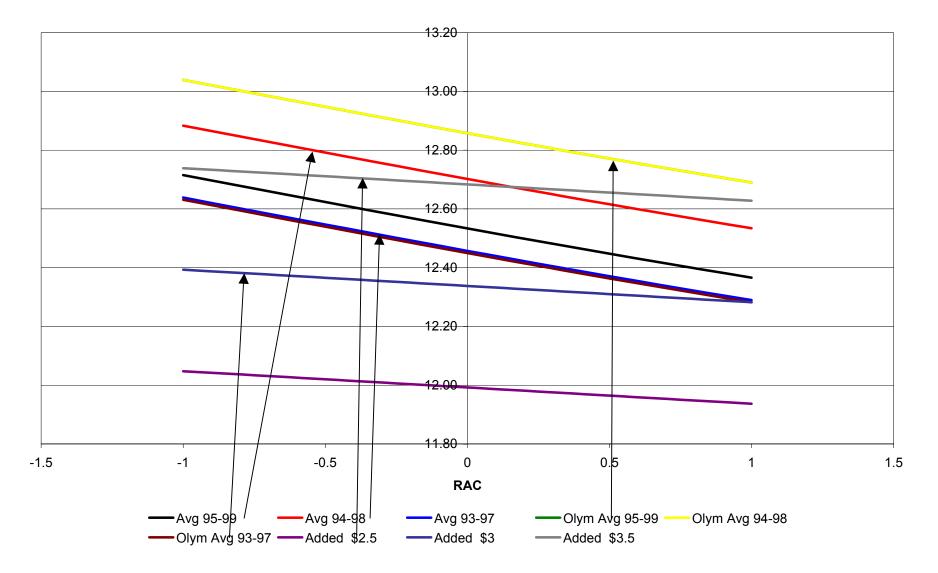
- Strategies with a 70 percent or greater chance of total receipts exceeding \$12/cwt. in 2001 are:
 - Simple Average 1995-1999
 - Simple Average 1994-1998
 - Simple Average 1993-1997
 - Olympic Average 1995-1999
 - Olympic Average 1994-1998
 - Olympic Average 1993-1997
 - Added AMTA of \$2.5/cwt.
 - Added AMTA of \$3.0/cwt.
 - Added AMTA of \$3.5/cwt.
- These strategies were singled out for more detailed risk analysis in terms of:
 - Cumulative distributions of total receipts per cwt.
 - Risk ranking of strategies
 - Cumulative distributions of government costs

Total Receipts per Cwt. for Rice in the U.S. Under Alternative Counter Cyclical Payments and Added AMTA Payments (\$/CWT.)

Probability (on Y axis)of receipts/cwt being less than a particular level on the X axis.



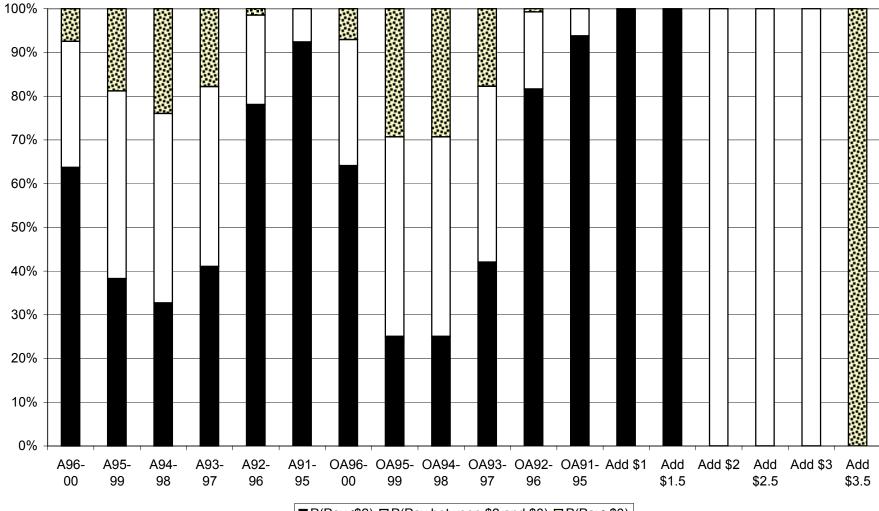
Use of Certaintity Equivalents to Compare Alternative Counter Cyclical Base Periods and Added AMTA Payments Under Risk: U. S.



| Summary of the 2001 Counter Cyclical Payment for Rice Under Alternative Base Periods | | | | | | | | | |
|--|--------------|-------------|-----------|---|-------------|-------------|-------------|--|--|
| Assuming the Trigger Cut Off is 100% of the Base Receipts | | | | | | | | | |
| | ТΧ | AR | CA | LA | MS | MO | US | | |
| Average Counter Cyclical Payment in 2001 (\$/CWT) | | | | | | | | | |
| Avg 96-00 | 1.73 | 1.78 | 1.80 | 1.74 | 1.79 | 1.81 | 1.77 | | |
| Avg 95-00 Avg 95-99 | 2.17 | 2.27 | 2.43 | 2.31 | 2.32 | 2.36 | 2.27 | | |
| Avg 95-99 Avg 94-98 | 2.17 | 2.27 | 2.43 | 2.31 | 2.52 | 2.30 | 2.27 | | |
| Avg 94-98 Avg 93-97 | 2.33 | 1.95 | 2.80 | 2.40 | 2.55 | 2.41 | 2.44 | | |
| Avg 93-97 Avg 92-96 | 1.48 | 1.95 | 2.94 | 1.46 | 1.42 | 1.20 | 1.41 | | |
| Avg 92-90 Avg 91-95 | 0.96 | 0.60 | 1.88 | 0.90 | 0.88 | 0.66 | 0.84 | | |
| Olym Avg 96-00 | 1.64 | 1.72 | 1.00 | 1.74 | 1.83 | 1.79 | 1.76 | | |
| Olym Avg 95-00 Olym Avg 95-99 | 2.36 | 2.53 | 2.78 | 2.57 | 2.71 | 2.64 | 2.59 | | |
| Olym Avg 93-99 Olym Avg 94-98 | 2.36 | 2.53 | 2.78 | 2.57 | 2.71 | 2.64 | 2.59 | | |
| Olym Avg 93-97 | 1.99 | 1.84 | 3.01 | 2.25 | 2.15 | 1.95 | 2.19 | | |
| Olym Avg 93-97 Olym Avg 92-96 | 1.39 | 0.95 | 2.26 | 1.35 | 1.25 | 1.93 | 1.26 | | |
| Olym Avg 92-90 Olym Avg 91-95 | 0.99 | 0.51 | 2.20 | 0.85 | 0.87 | 0.59 | 0.81 | | |
| Olym Avg 91-95 | 0.99 | 0.51 | 2.04 | 0.05 | 0.07 | 0.59 | 0.01 | | |
| Probability of Cour | nter Cyclica | I Payment | Less than | \$2/CWT | | | | | |
| Avg 96-00 | 0.732 | 0.643 | 0.578 | 0.633 | 0.614 | 0.582 | 0.637 | | |
| Avg 95-99 | 0.422 | 0.375 | 0.334 | 0.390 | 0.356 | 0.382 | 0.383 | | |
| Avg 94-98 | 0.361 | 0.333 | 0.207 | 0.353 | 0.304 | 0.352 | 0.327 | | |
| Avg 93-97 | 0.434 | 0.530 | 0.183 | 0.432 | 0.422 | 0.500 | 0.410 | | |
| Avg 92-96 | 0.753 | 0.791 | 0.499 | 0.742 | 0.755 | 0.796 | 0.781 | | |
| Avg 91-95 | 0.913 | 0.974 | 0.569 | 0.910 | 0.912 | 0.962 | 0.924 | | |
| Olym Avg 96-00 | 0.743 | 0.674 | 0.585 | 0.633 | 0.605 | 0.589 | 0.641 | | |
| Olym Avg 95-99 | 0.345 | 0.275 | 0.209 | 0.262 | 0.205 | 0.257 | 0.251 | | |
| Olym Avg 94-98 | 0.345 | 0.275 | 0.209 | 0.262 | 0.205 | 0.257 | 0.251 | | |
| Olym Avg 93-97 | 0.523 | 0.577 | 0.157 | 0.414 | 0.447 | 0.524 | 0.421 | | |
| Olym Avg 92-96 | 0.807 | 0.876 | 0.398 | 0.798 | 0.790 | 0.851 | 0.816 | | |
| Olym Avg 91-95 | 0.899 | 0.987 | 0.538 | 0.941 | 0.913 | 0.971 | 0.938 | | |
| | | | • • • | A A (A) A / T | | | | | |
| Probability of Cour | - | - | | | | 0.440 | 0.074 | | |
| Avg 96-00 | 0.038 | 0.091 | 0.113 | 0.057 | 0.088 | 0.116 | 0.074 | | |
| Avg 95-99 | 0.165 | 0.223 | 0.296 | 0.188 | 0.217 | 0.254 | 0.188 | | |
| Avg 94-98 | 0.223 | 0.235 | 0.423 | 0.219 | 0.266 | 0.260 | 0.240 | | |
| Avg 93-97 | 0.145 | 0.142 | 0.436 | 0.178 | 0.196 | 0.160 | 0.178 | | |
| Avg 92-96 | 0.016 | 0.000 | 0.177 | 0.025 | 0.029 | 0.013 | 0.015 | | |
| Avg 91-95 | 0.000 | 0.000 | 0.124 | 0.000 | 0.000 | 0.000 | 0.000 | | |
| Olym Avg 96-00 | 0.025 | 0.080 | 0.098 | 0.057 | 0.093 | 0.114 | 0.071 | | |
| Olym Avg 95-99 | 0.224 | 0.257 | 0.421 | 0.304 | 0.354 | 0.313 | 0.293 | | |
| Olym Avg 94-98 | 0.224 | 0.257 | 0.421 | 0.304 | 0.354 | 0.313 | 0.293 | | |
| Olym Avg 93-97 | 0.105 | 0.108 | 0.447 | 0.181 | 0.185 | 0.150 | 0.177 | | |
| Olym Avg 92-96 | 0.008 | 0.000 | 0.233 | 0.019 | 0.010 | 0.000 | 0.007 | | |
| Olym Avg 91-95 | 0.000 | 0.000 | 0.167 | 0.000 | 0.000 | 0.000 | 0.000 | | |

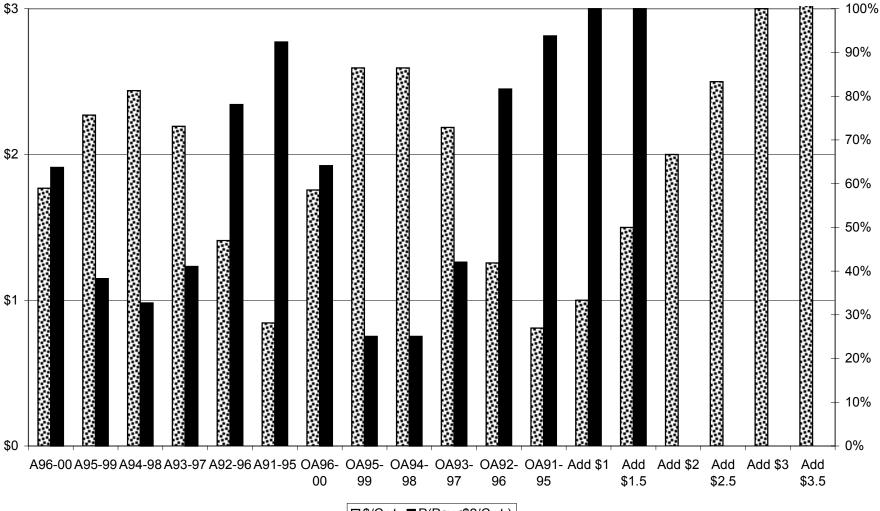
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Average CCP payment to rice is calculated assuming that payments are triggered on a state-by-state basis.



Probability of Counter Cyclical Payments or Added AMTA Payments in 2001 Being Between \$2 and \$3 per Cwt.: U.S.

■ P(Pay<\$2) □ P(Pay between \$2 and \$3) P(Pay>\$3)



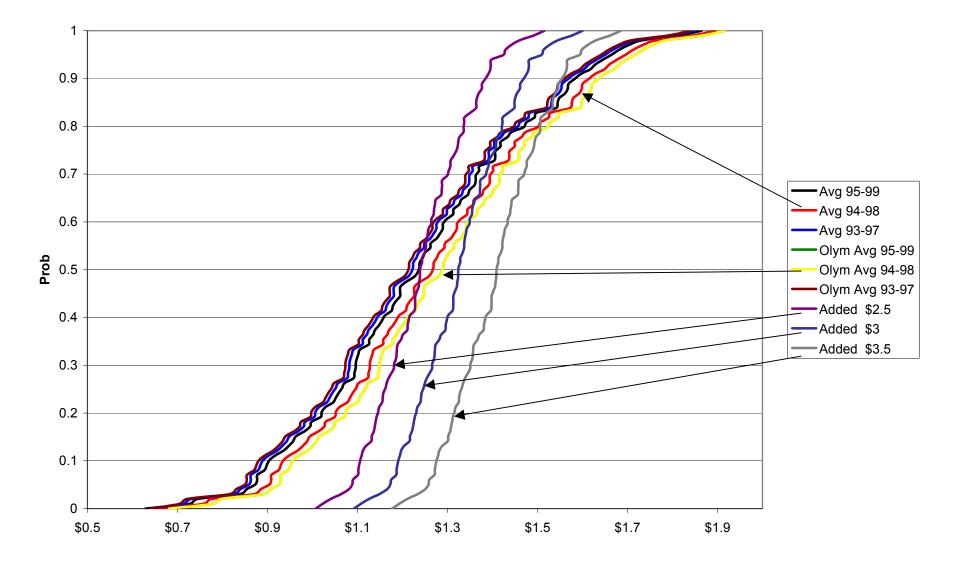
Average Counter Cyclical Payment or Added AMTA Payments per Cwt and Probability of Receiving Less Than \$2 per Cwt: U.S.

| | Average | Probability of Total Payments < Specified Amount in Billions of \$s | | | | | | |
|----------------|------------|---|--------|--------|--------|--------|--|--|
| | Cost | | \$1.00 | \$1.25 | \$1.50 | \$1.75 | | |
| | (mil. \$s) | | | | | | | |
| Avg 96-00 | 1,144 | 10% | 32% | 67% | 91% | 100% | | |
| Avg 95-99 | 1,241 | 4% | 19% | 54% | 83% | 98% | | |
| Avg 94-98 | 1,272 | 3% | 16% | 49% | 80% | 98% | | |
| Avg 93-97 | 1,227 | 4% | 20% | 56% | 83% | 98% | | |
| Avg 92-96 | 1,089 | 15% | 40% | 74% | 95% | 100% | | |
| Avg 91-95 | 996 | 23% | 56% | 83% | 98% | 100% | | |
| Olym Avg 96-00 | 1,135 | 11% | 34% | 68% | 92% | 100% | | |
| Olym Avg 95-99 | 1,294 | 3% | 14% | 47% | 79% | 97% | | |
| Olym Avg 94-98 | 1,294 | 3% | 14% | 47% | 79% | 97% | | |
| Olym Avg 93-97 | 1,218 | 4% | 21% | 57% | 84% | 99% | | |
| Olym Avg 92-96 | 1,063 | 16% | 44% | 78% | 96% | 100% | | |
| Olym Avg 91-95 | 992 | 22% | 57% | 84% | 99% | 100% | | |
| Added \$1 | 989 | 4% | 57% | 100% | 100% | 100% | | |
| Added \$1.5 | 1,074 | 0% | 28% | 95% | 100% | 100% | | |
| Added \$2 | 1,158 | 0% | 6% | 79% | 100% | 100% | | |
| Added \$2.5 | 1,243 | 0% | 0% | 54% | 99% | 100% | | |
| Added \$3 | 1,328 | 0% | 0% | 27% | 95% | 100% | | |
| Added \$3.5 | 1,413 | 0% | 0% | 5% | 78% | 100% | | |

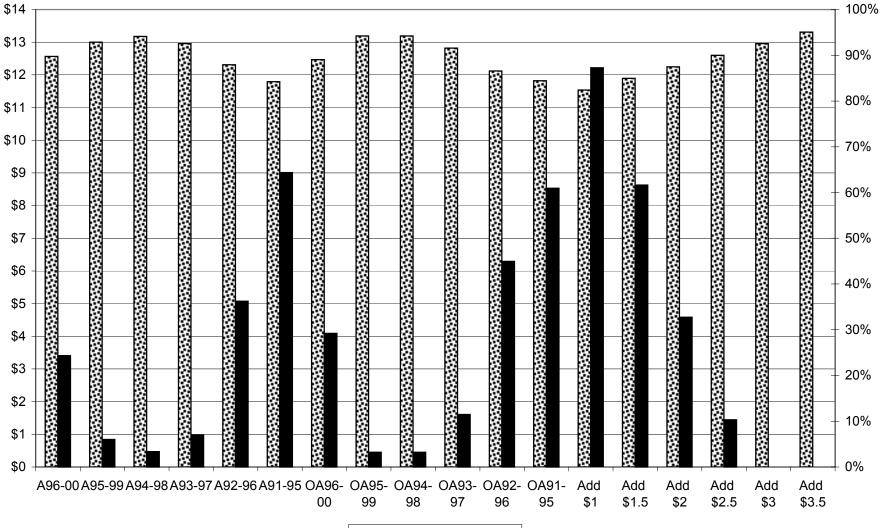
Government Cost for AMTA, LDP, and Counter Cyclical Payments or Added AMTA Payments in 2001, Assuming Alternative Periods for Defining the Base Insurable Revenue and a 100% Trigger or Alternative Added AMTA

The total government payment to rice farmers in six states assumes the counter cyclical payment is triggered by low receipts in individual states. Total costs are for the six states: TX, LA, MS, MS, Mo, Ak, and CA. As a reference point the 2001 government costs to rice are projected to be \$839,000,000 in the FAPRI Baseline for 2001

As a reference point the 2001 government costs to rice are projected to be \$839,000,000 in the FAPRI Baseline for 2007 for AMTA and Loan Deficiency Payments.

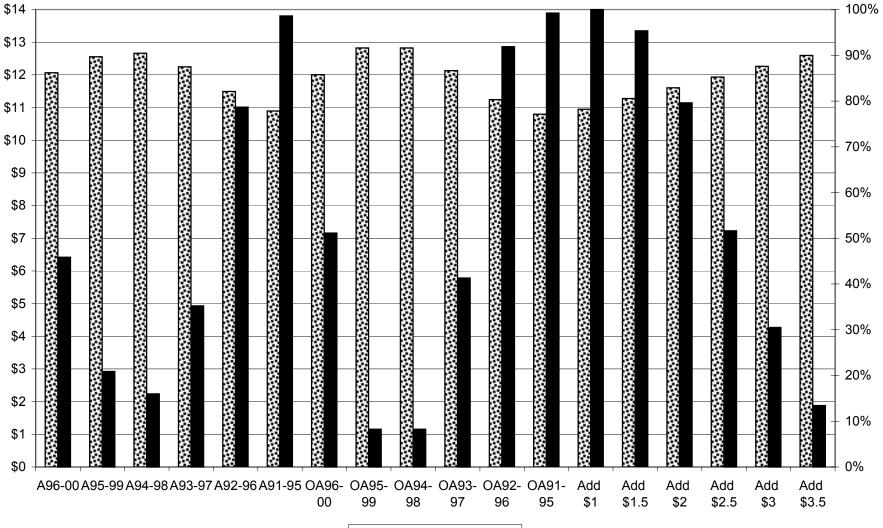


Cumulative Distribution of Total Government Costs to Rice for 2001 Under Alternative Counter Cyclical Payments and Added AMTAs (Billion \$s)



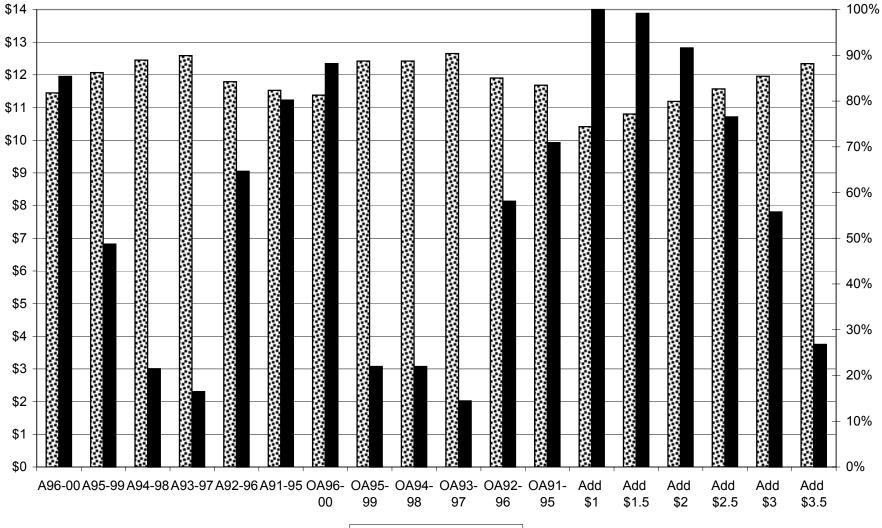
Average Receipts Per Cwt and Probability of Receiving Less Than \$12 Per Cwt: Texas

\$/Cwt ■ Prob < \$12/CWT



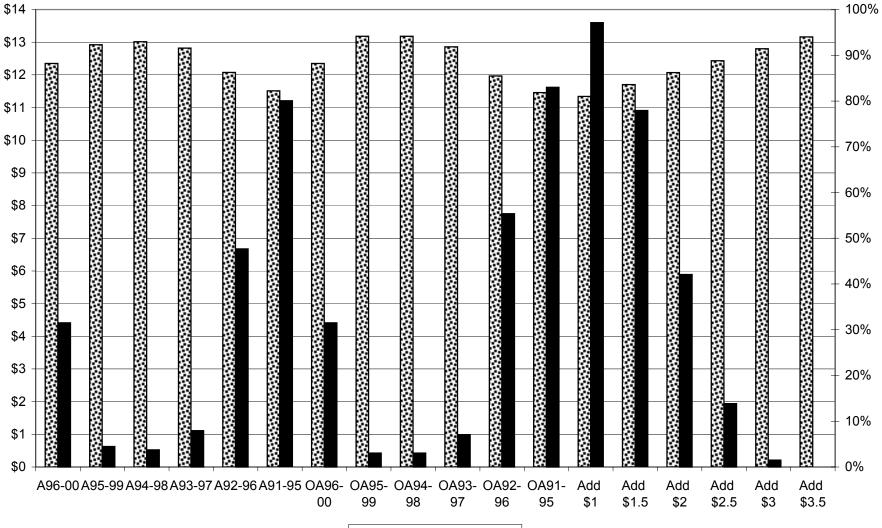
Average Receipts Per Cwt and Probability of Receiving Less Than \$12 Per Cwt: Arkansas

\$/Cwt ■ Prob < \$12/CWT



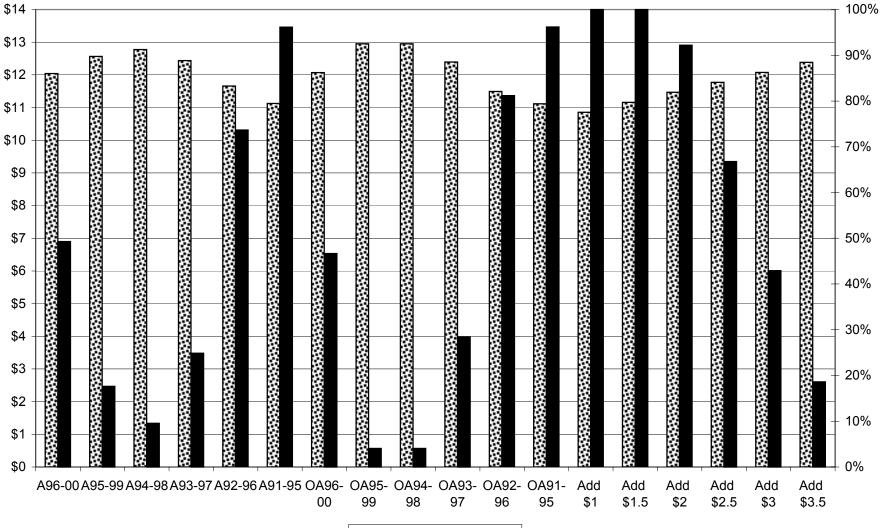
Average Receipts Per Cwt and Probability of Receiving Less Than \$12 Per Cwt: California

■ \$/Cwt ■ Prob < \$12/CWT



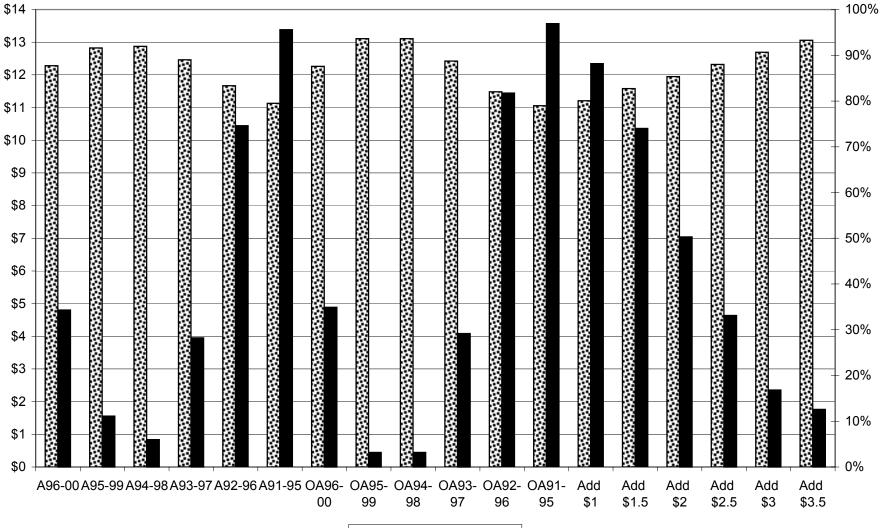
Average Receipts Per Cwt and Probability of Receiving Less Than \$12 Per Cwt: Louisianna

\$/Cwt ■ Prob < \$12/CWT



Average Receipts Per Cwt and Probability of Receiving Less Than \$12 Per Cwt: Mississippi

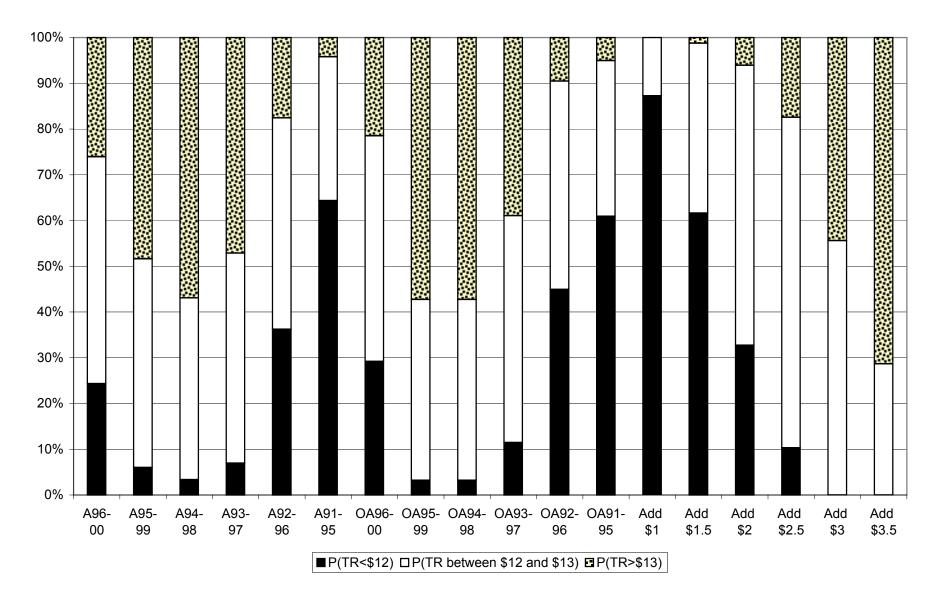
■ \$/Cwt ■ Prob < \$12/CWT

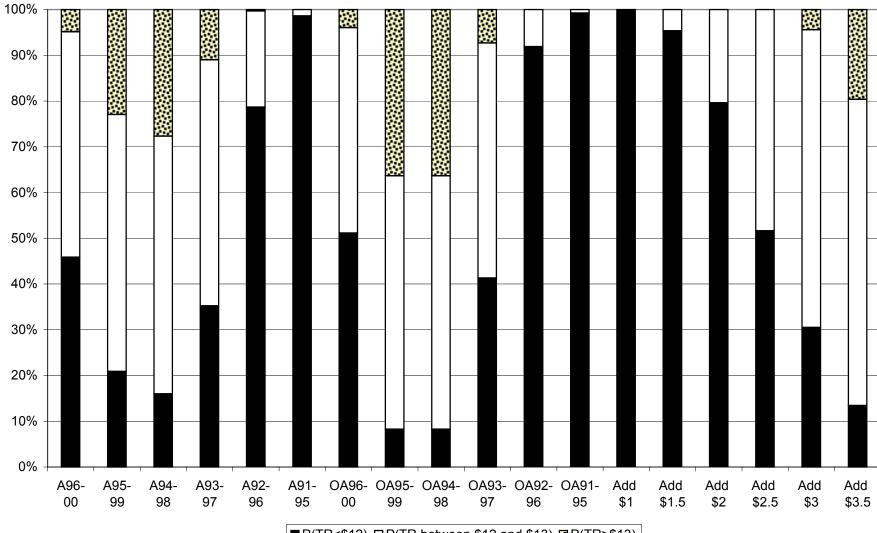


Average Receipts Per Cwt and Probability of Receiving Less Than \$12 Per Cwt: Missouri

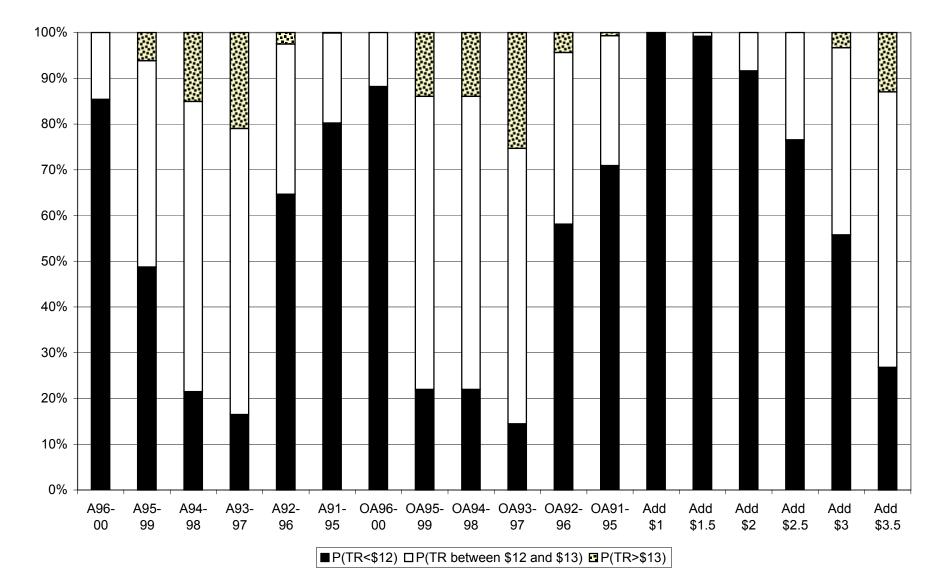
■ \$/Cwt ■ Prob < \$12/CWT

Probability of Average Receipts Per Cwt Being Between \$12 and \$13: Texas

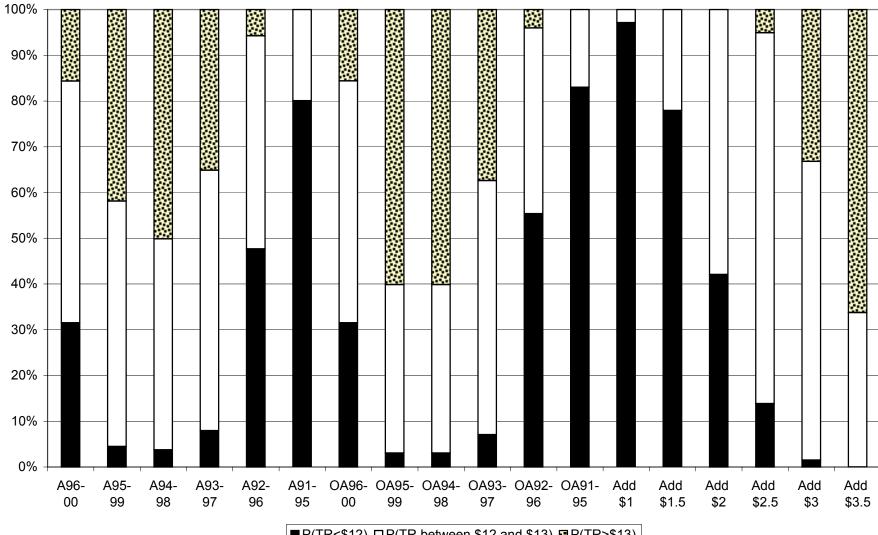




Probability of Average Receipts Per Cwt Being Between \$12 and \$13: Arkansas

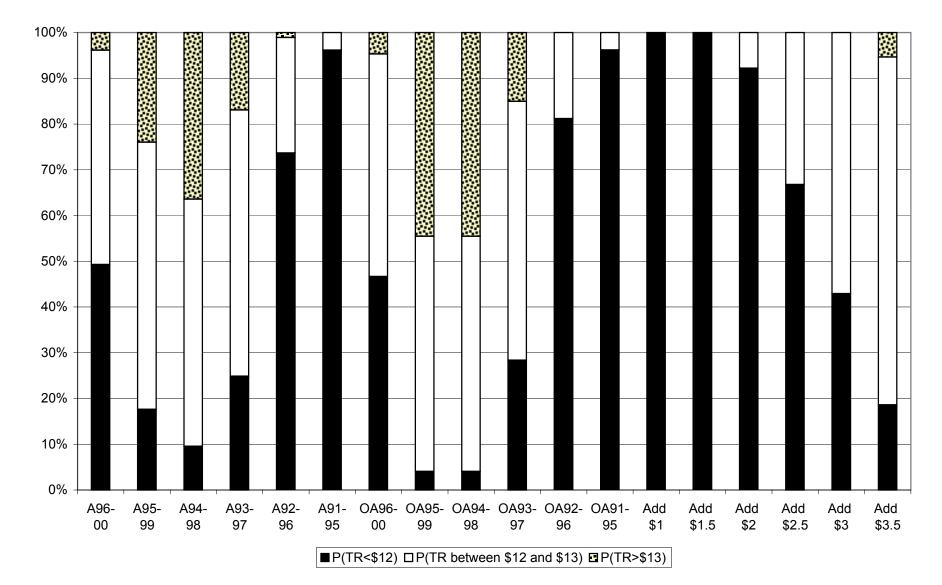


Probability of Average Receipts Per Cwt Being Between \$12 and \$13: California

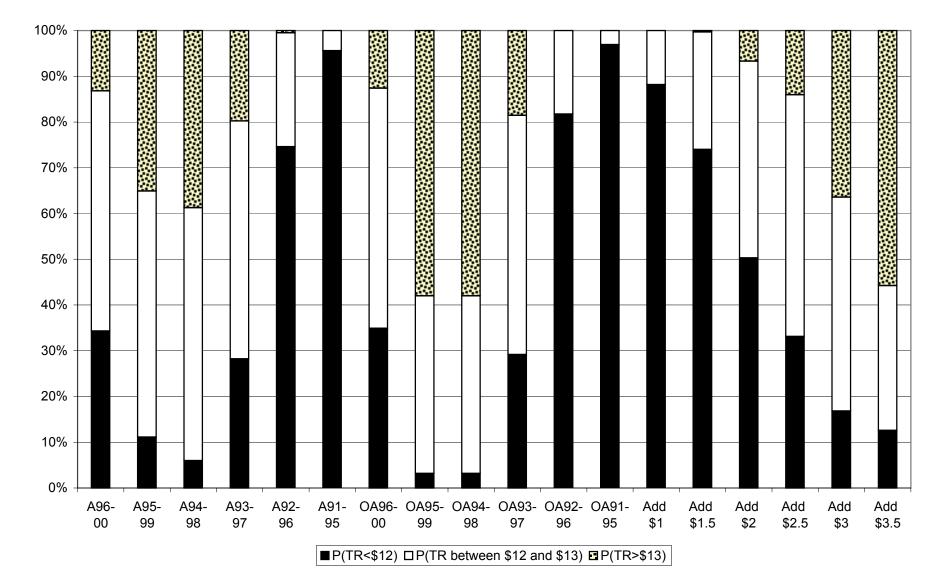


Probability of Average Receipts Per Cwt Being Between \$12 and \$13: Louisianna

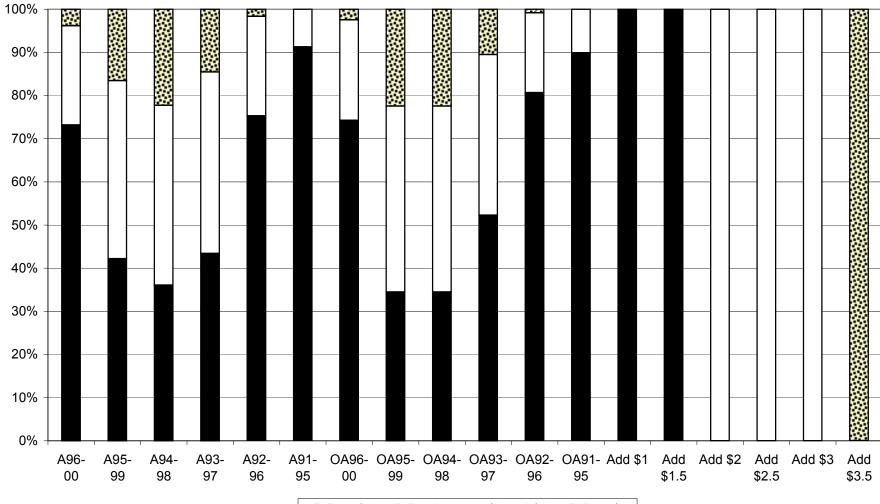
■P(TR<\$12) □P(TR between \$12 and \$13) ■P(TR>\$13)



Probability of Average Receipts Per Cwt Being Between \$12 and \$13: Mississippi



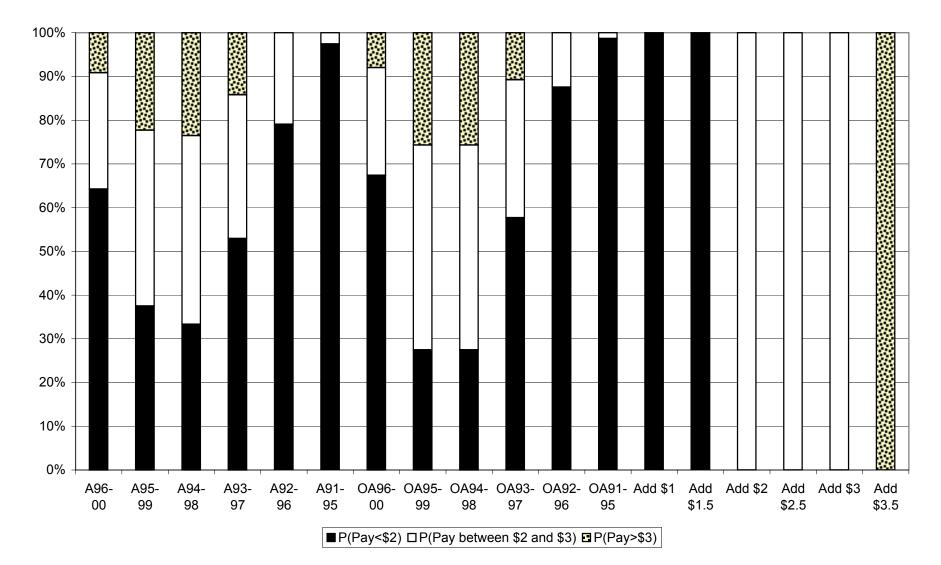
Probability of Average Receipts Per Cwt Being Between \$12 and \$13: Missouri



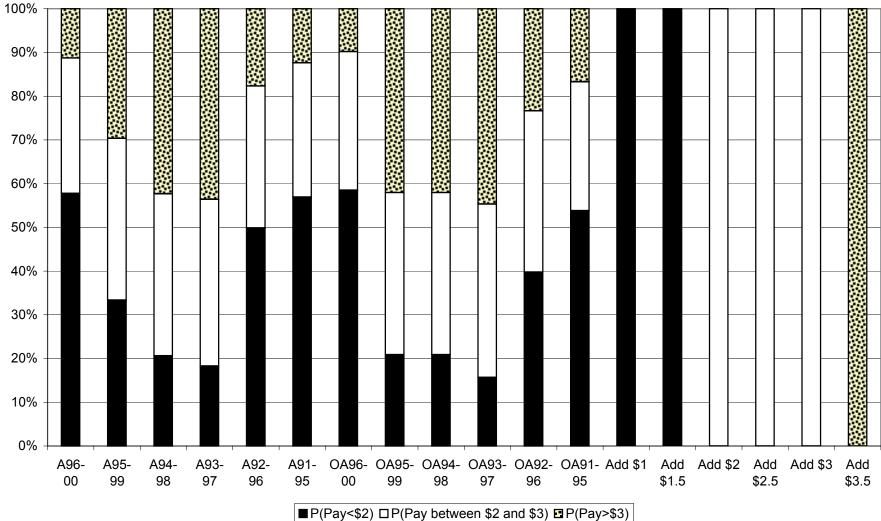
Probability of Counter Cyclical Payment or Added AMTA Payments Per Cwt Being Between \$2 and \$3: Texas

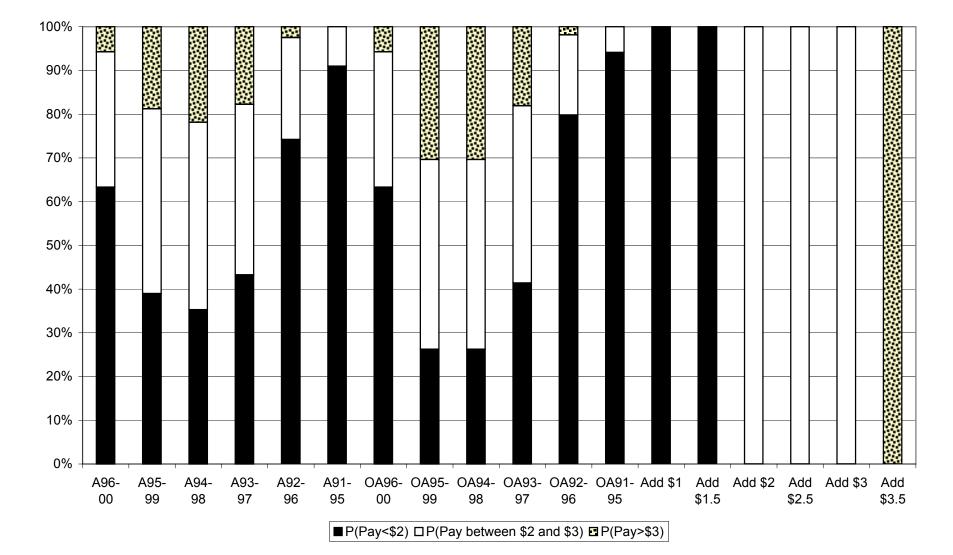
 \blacksquare P(Pay<\$2) \square P(Pay between \$2 and \$3) \blacksquare P(Pay>\$3)

Probability of Counter Cyclical Paymnet or Added AMTA Payments Per Cwt Being Between \$2 and \$3: Arkansas

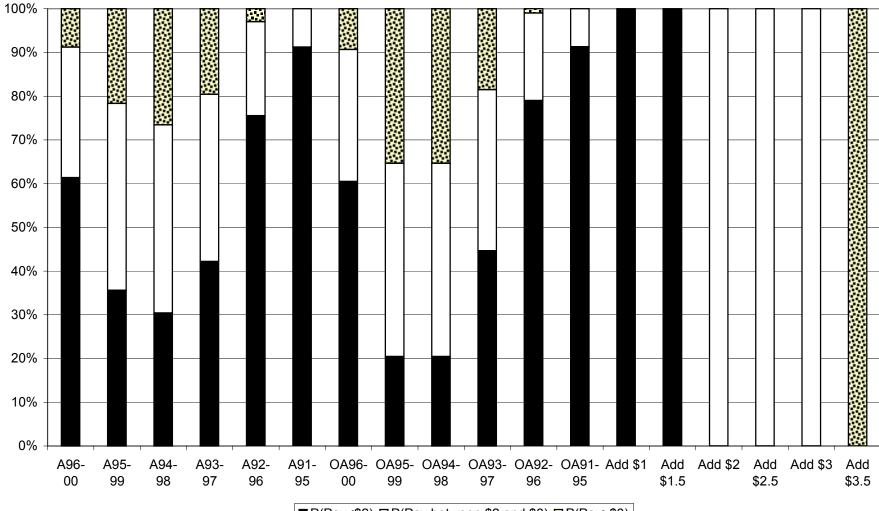


Probability of Counter Cyclical Payment or Added AMTA Payments Per Cwt Being Between \$2 and \$3: California



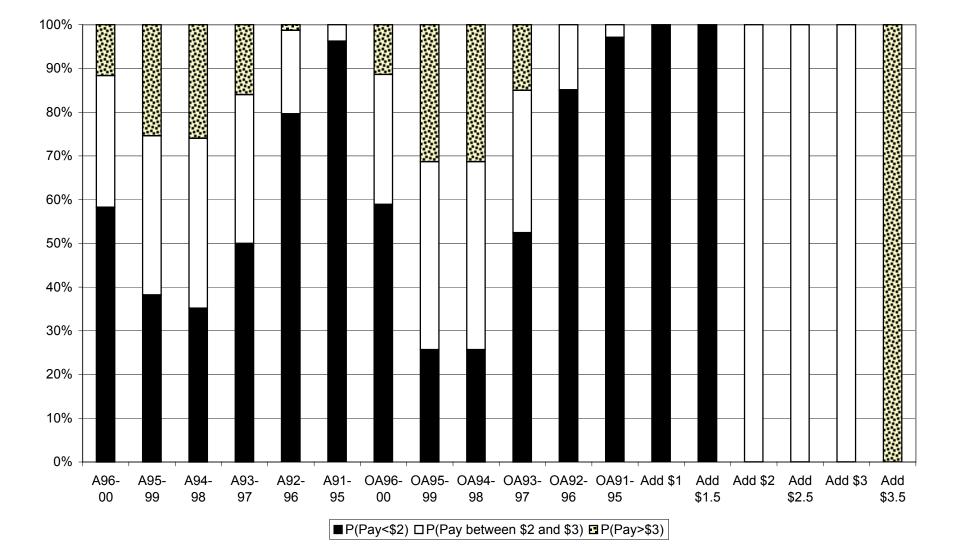


Probability of Counter Cyclical Payment or Added AMTA Payments Per Cwt Being Between \$2 and \$3: Louisianna

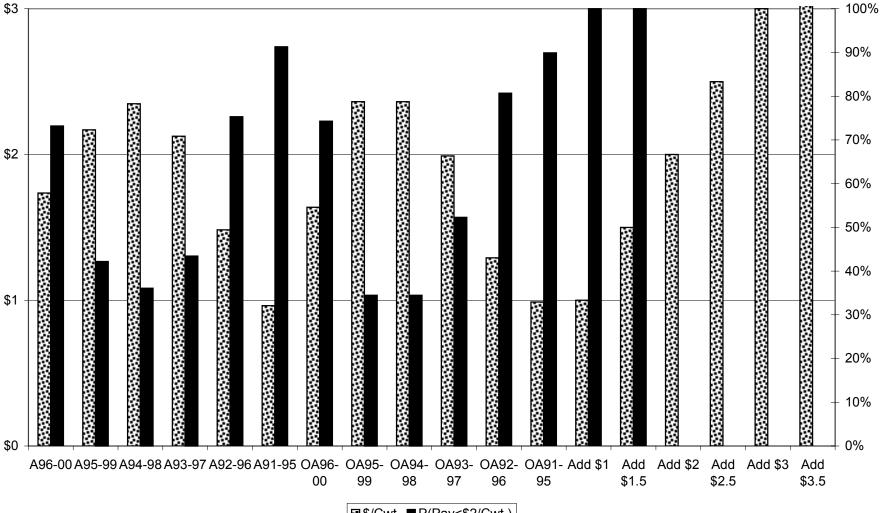


Probability of Counter Cyclical Payment or Added AMTA Payments Per Cwt Being Between \$2 and \$3: Mississippi

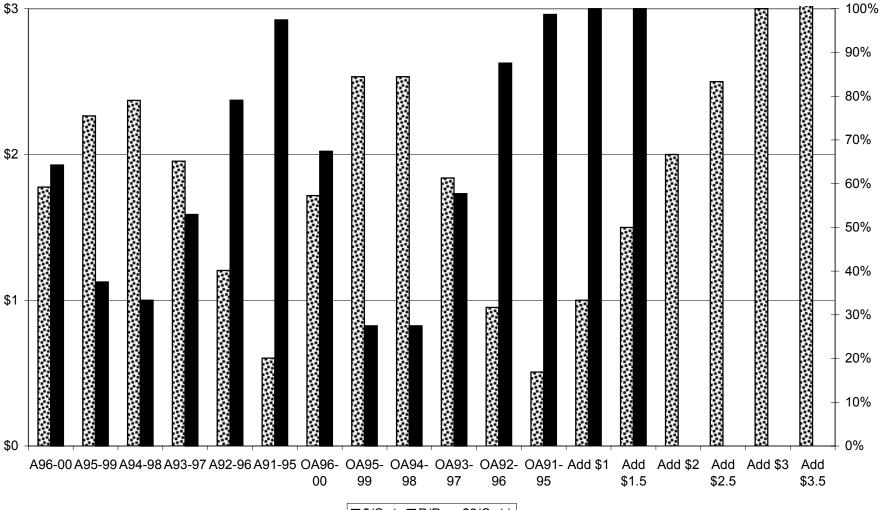
 $\blacksquare P(Pay<\$2) \Box P(Pay between \$2 and \$3) \blacksquare P(Pay>\$3)$



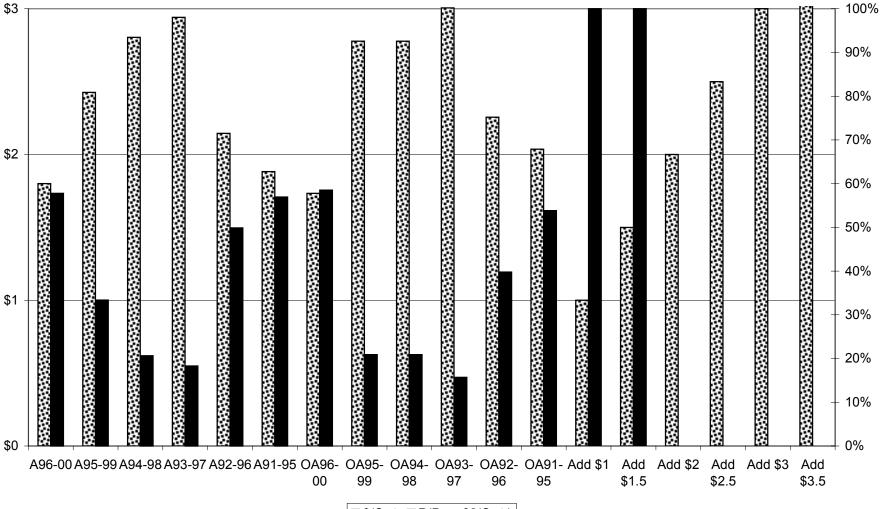
Probability of Counter Cyclical Payment or Added AMTA Payments Per Cwt Being Between \$2 and \$3: Missouri



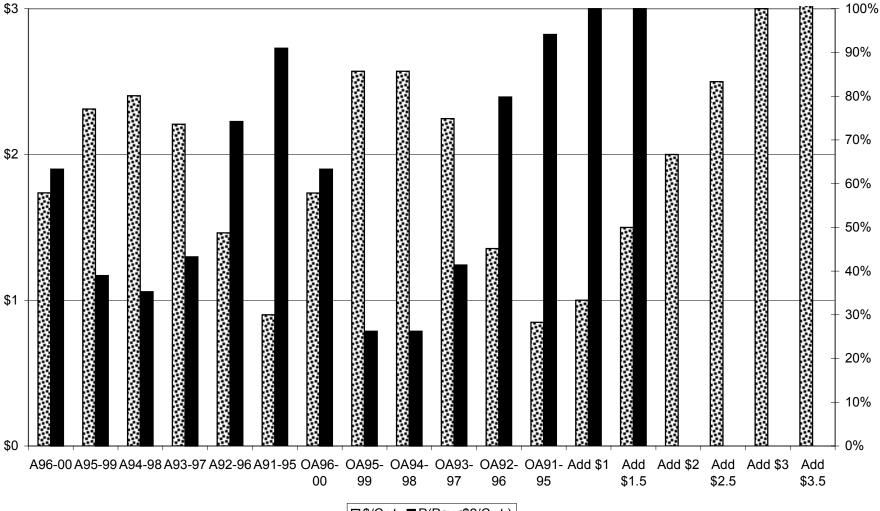
Average Counter Cyclical or Added AMTA Payments Per Cwt and Probability of Receiving Less Than \$2 Per Cwt: Texas



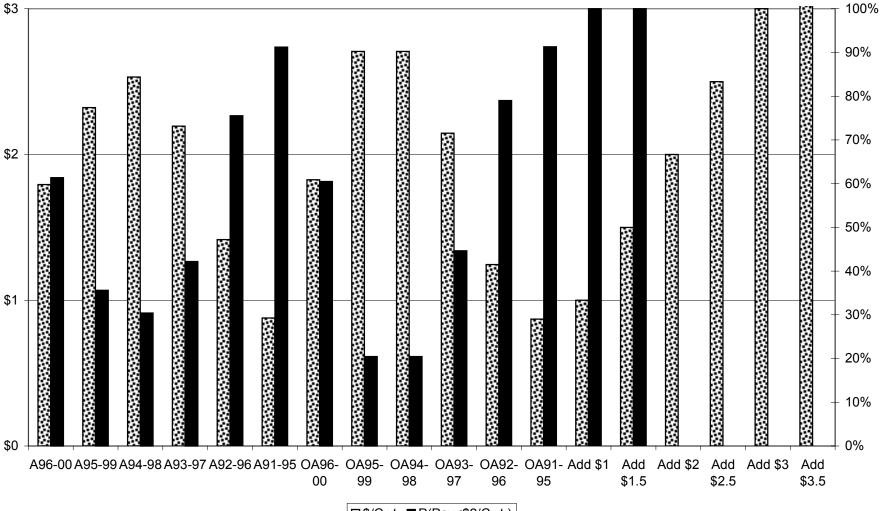
Average Counter Cyclical or Added AMTA Payments Per Cwt and Probability of Receiving Less Than \$2 Per Cwt: Arkansas



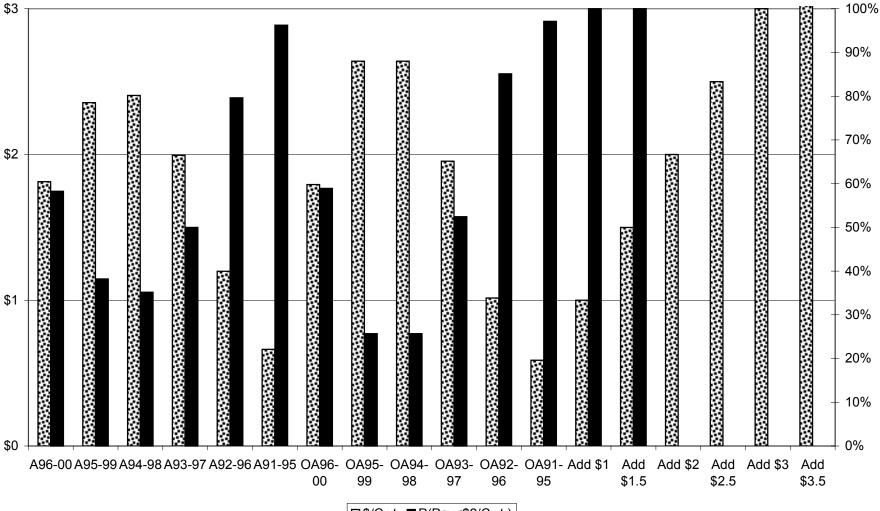
Average Counter Cyclical or Added AMTA Payments Per Cwt and Probability of Receiving Less Than \$2 Per Cwt: California



Average Counter Cyclical or Added AMTA Payments Per Cwt and Probability of Receiving Less Than \$2 Per Cwt: Louisianna



Average Counter Cyclical or Added AMTA Payments Per Cwt and Probability of Receiving Less Than \$2 Per Cwt: Mississippi



Average Counter Cyclical or Added AMTA Payments Per Cwt and Probability of Receiving Less Than \$2 Per Cwt: Missouri

| Summary of 2001 Total Receipts for Rice Under Alternative Base Period Definitions | | | | | | | | | |
|---|-------------------|--------------|------------|-------|-------|-------|-------|--|--|
| Assuming the Trigger Cut Off is 100% of the Base Receipts | | | | | | | | | |
| | ТΧ | AR | CA | LA | MS | MO | US | | |
| | | | | | | | | | |
| Average Total Rece | • | • • | | | | | | | |
| Avg 96-00 | 12.57 | 12.07 | 11.45 | 12.35 | 12.04 | 12.28 | 12.03 | | |
| Avg 95-99 | 13.00 | 12.56 | 12.07 | 12.92 | 12.57 | 12.82 | 12.53 | | |
| Avg 94-98 | 13.18 | 12.66 | 12.45 | 13.01 | 12.78 | 12.87 | 12.70 | | |
| Avg 93-97 | 12.95 | 12.25 | 12.59 | 12.82 | 12.44 | 12.46 | 12.46 | | |
| Avg 92-96 | 12.31 | 11.50 | 11.79 | 12.07 | 11.66 | 11.67 | 11.67 | | |
| Avg 91-95 | 11.79 | 10.89 | 11.53 | 11.51 | 11.12 | 11.13 | 11.11 | | |
| Olym Avg 96-00 | 12.47 | 12.01 | 11.38 | 12.35 | 12.07 | 12.26 | 12.02 | | |
| Olym Avg 95-99 | 13.19 | 12.82 | 12.42 | 13.18 | 12.95 | 13.11 | 12.86 | | |
| Olym Avg 94-98 | 13.19 | 12.82 | 12.42 | 13.18 | 12.95 | 13.11 | 12.86 | | |
| Olym Avg 93-97 | 12.82 | 12.13 | 12.65 | 12.86 | 12.39 | 12.42 | 12.45 | | |
| Olym Avg 92-96 | 12.12 | 11.24 | 11.90 | 11.97 | 11.49 | 11.48 | 11.52 | | |
| Olym Avg 91-95 | 11.82 | 10.80 | 11.68 | 11.46 | 11.12 | 11.06 | 11.07 | | |
| | | | | | | | | | |
| Probability of Total | Receipts I | _ess than \$ | 512/CWT | | | | | | |
| Avg 96-00 | 0.243 | 0.458 | 0.854 | 0.315 | 0.493 | 0.343 | 0.486 | | |
| Avg 95-99 | 0.060 | 0.209 | 0.487 | 0.045 | 0.176 | 0.111 | 0.196 | | |
| Avg 94-98 | 0.034 | 0.160 | 0.215 | 0.037 | 0.096 | 0.060 | 0.133 | | |
| Avg 93-97 | 0.069 | 0.352 | 0.165 | 0.079 | 0.249 | 0.282 | 0.249 | | |
| Avg 92-96 | 0.362 | 0.787 | 0.647 | 0.477 | 0.737 | 0.746 | 0.718 | | |
| Avg 91-95 | 0.644 | 0.986 | 0.802 | 0.801 | 0.961 | 0.956 | 0.944 | | |
| Olym Avg 96-00 | 0.292 | 0.512 | 0.882 | 0.315 | 0.467 | 0.349 | 0.499 | | |
| Olym Avg 95-99 | 0.032 | 0.083 | 0.220 | 0.030 | 0.041 | 0.032 | 0.071 | | |
| Olym Avg 94-98 | 0.032 | 0.083 | 0.220 | 0.030 | 0.041 | 0.032 | 0.071 | | |
| Olym Avg 93-97 | 0.115 | 0.413 | 0.144 | 0.071 | 0.284 | 0.292 | 0.261 | | |
| Olym Avg 92-96 | 0.449 | 0.919 | 0.581 | 0.554 | 0.812 | 0.817 | 0.784 | | |
| Olym Avg 91-95 | 0.609 | 0.992 | 0.709 | 0.830 | 0.962 | 0.969 | 0.949 | | |
| , , | | | | | | | | | |
| Probability of Total | Receipts (| Greater tha | n \$13/CWT | | | | | | |
| Avg 96-00 | 0.260 | 0.049 | 0.000 | 0.156 | 0.039 | 0.132 | 0.056 | | |
| Avg 95-99 | 0.484 | 0.229 | 0.062 | 0.419 | 0.240 | 0.351 | 0.231 | | |
| Avg 94-98 | 0.569 | 0.277 | 0.151 | 0.501 | 0.364 | 0.387 | 0.289 | | |
| Avg 93-97 | 0.471 | 0.110 | 0.210 | 0.351 | 0.169 | 0.198 | 0.204 | | |
| Avg 92-96 | 0.176 | 0.003 | 0.025 | 0.057 | 0.011 | 0.005 | 0.013 | | |
| Avg 91-95 | 0.042 | 0.000 | 0.001 | 0.000 | 0.000 | 0.000 | 0.000 | | |
| Olym Avg 96-00 | 0.215 | 0.040 | 0.000 | 0.156 | 0.047 | 0.126 | 0.054 | | |
| Olym Avg 95-99 | 0.573 | 0.363 | 0.139 | 0.601 | 0.445 | 0.580 | 0.360 | | |
| Olym Avg 94-98 | 0.573 | 0.363 | 0.139 | 0.601 | 0.445 | 0.580 | 0.360 | | |
| Olym Avg 93-97 | 0.389 | 0.073 | 0.253 | 0.374 | 0.150 | 0.185 | 0.201 | | |
| Olym Avg 92-96 | 0.095 | 0.000 | 0.044 | 0.040 | 0.000 | 0.000 | 0.002 | | |
| Olym Avg 91-95 | 0.051 | 0.000 | 0.007 | 0.000 | 0.000 | 0.000 | 0.000 | | |
| | | | | | | | | | |

Summary of 2001 Total Receipts for Rice Under Alternative Base Period Definitions

Total receipts includes market receipts, AMTA payments, Loan Deficiency Payments, and Counter Cyclical Payments calculated for the alternative base periods.

| Summary of the Total Receipts per Cwt for Rice Under Alternative Base Period Definitions | | | | | | | |
|--|--------------|--------------|-------------|-------|-------|-------|-------|
| Assuming the Trigge | | | | • | | | |
| | ТΧ | AR | CA | LA | MS | MO | US |
| Average Total Rece | ninte nor Pl | antod Acro | in 2001 (\$ | | | | |
| Avg 96-00 | 12.17 | 11.68 | 11.07 | 11.95 | 11.65 | 11.90 | 11.64 |
| Avg 95-99 | 12.17 | 12.13 | 11.64 | 12.49 | 12.14 | 12.40 | 12.11 |
| Avg 93-99 Avg 94-98 | 12.50 | 12.13 | 12.00 | 12.58 | 12.34 | 12.45 | 12.11 |
| Avg 93-97 | 12.75 | 11.84 | 12.00 | 12.30 | 12.04 | 12.43 | 12.04 |
| Avg 92-96 | 11.94 | 11.17 | 11.38 | 11.71 | 11.31 | 11.35 | 11.31 |
| Avg 91-95 | 11.49 | 10.69 | 11.14 | 11.24 | 10.86 | 10.92 | 10.84 |
| Olym Avg 96-00 | 12.08 | 11.63 | 11.01 | 11.95 | 11.68 | 11.88 | 11.63 |
| Olym Avg 95-99 | 12.76 | 12.39 | 11.97 | 12.74 | 12.50 | 12.67 | 12.41 |
| Olym Avg 94-98 | 12.76 | 12.39 | 11.97 | 12.74 | 12.50 | 12.67 | 12.41 |
| Olym Avg 93-97 | 12.41 | 11.73 | 12.19 | 12.43 | 11.97 | 12.03 | 12.03 |
| Olym Avg 92-96 | 11.77 | 10.96 | 11.48 | 11.62 | 11.17 | 11.20 | 11.18 |
| Olym Avg 91-95 | 11.51 | 10.62 | 11.28 | 11.20 | 10.85 | 10.87 | 10.82 |
| olym rug o'r oo | 11.01 | 10.02 | 11.20 | 11.20 | 10.00 | 10.07 | 10.02 |
| Probability of Total | Receipts L | ess than \$. | 12/CWT | | | | |
| Avg 96-00 | 0.434 | 0.723 | 0.946 | 0.563 | 0.739 | 0.616 | 0.732 |
| Avg 95-99 | 0.241 | 0.408 | 0.763 | 0.216 | 0.428 | 0.297 | 0.428 |
| Avg 94-98 | 0.149 | 0.356 | 0.551 | 0.165 | 0.306 | 0.286 | 0.366 |
| Avg 93-97 | 0.248 | 0.634 | 0.439 | 0.285 | 0.528 | 0.467 | 0.484 |
| Avg 92-96 | 0.554 | 0.944 | 0.882 | 0.714 | 0.905 | 0.875 | 0.884 |
| Avg 91-95 | 0.785 | 1.000 | 0.929 | 0.941 | 0.988 | 0.994 | 0.986 |
| Olym Avg 96-00 | 0.470 | 0.760 | 0.953 | 0.563 | 0.734 | 0.641 | 0.737 |
| Olym Avg 95-99 | 0.138 | 0.310 | 0.554 | 0.095 | 0.214 | 0.155 | 0.281 |
| Olym Avg 94-98 | 0.138 | 0.310 | 0.554 | 0.095 | 0.214 | 0.155 | 0.281 |
| Olym Avg 93-97 | 0.315 | 0.696 | 0.393 | 0.259 | 0.552 | 0.492 | 0.489 |
| Olym Avg 92-96 | 0.660 | 0.981 | 0.837 | 0.754 | 0.935 | 0.951 | 0.933 |
| Olym Avg 91-95 | 0.776 | 1.000 | 0.900 | 0.947 | 0.988 | 0.997 | 0.988 |
| Probability of Total | Receints G | reater that | n \$13/CWT | | | | |
| Avg 96-00 | 0.099 | 0.011 | 0.000 | 0.030 | 0.010 | 0.036 | 0.012 |
| Avg 95-99 | 0.262 | 0.073 | 0.005 | 0.223 | 0.073 | 0.178 | 0.064 |
| Avg 94-98 | 0.342 | 0.106 | 0.049 | 0.246 | 0.141 | 0.193 | 0.114 |
| Avg 93-97 | 0.247 | 0.020 | 0.074 | 0.174 | 0.037 | 0.049 | 0.056 |
| Avg 92-96 | 0.072 | 0.000 | 0.000 | 0.003 | 0.000 | 0.000 | 0.000 |
| Avg 91-95 | 0.003 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Olym Avg 96-00 | 0.091 | 0.009 | 0.000 | 0.030 | 0.011 | 0.032 | 0.011 |
| Olym Avg 95-99 | 0.346 | 0.172 | 0.047 | 0.325 | 0.222 | 0.259 | 0.169 |
| Olym Avg 94-98 | 0.346 | 0.172 | 0.047 | 0.325 | 0.222 | 0.259 | 0.169 |
| Olym Avg 93-97 | 0.199 | 0.014 | 0.088 | 0.195 | 0.035 | 0.047 | 0.055 |
| Olym Avg 92-96 | 0.032 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Olym Avg 91-95 | 0.004 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| | | | | | | | |

Total receipts includes market receipts, AMTA payments, Loan Deficiency Payments, and Counter Cyclical Payments calculated for the alternative base periods.

| Summary of the Total Receipts per Cwt for Rice Under Alternative Base Period Definitions | | | | | | | |
|--|--------------|--------------|-------------|-------|-------|-------|-------|
| Assuming the Trigge | | | | • | | | |
| | ТХ | AR | CA | LA | MS | MO | US |
| Average Total Rece | pinte nor Pl | antod Acro | in 2001 (\$ | | | | |
| Avg 96-00 | 11.79 | 11.31 | 10.70 | 11.59 | 11.28 | 11.53 | 11.26 |
| Avg 95-99 | 12.16 | 11.72 | 11.22 | 12.07 | 11.71 | 11.99 | 11.69 |
| Avg 94-98 | 12.32 | 11.81 | 11.55 | 12.15 | 11.90 | 12.03 | 11.84 |
| Avg 93-97 | 12.12 | 11.46 | 11.67 | 11.98 | 11.61 | 11.69 | 11.62 |
| Avg 92-96 | 11.59 | 10.89 | 10.99 | 11.39 | 11.00 | 11.08 | 11.00 |
| Avg 91-95 | 11.24 | 10.53 | 10.77 | 11.02 | 10.64 | 10.76 | 10.63 |
| Olym Avg 96-00 | 11.71 | 11.27 | 10.65 | 11.59 | 11.31 | 11.52 | 11.26 |
| Olym Avg 95-99 | 12.33 | 11.95 | 11.52 | 12.30 | 12.05 | 12.23 | 11.97 |
| Olym Avg 94-98 | 12.33 | 11.95 | 11.52 | 12.30 | 12.05 | 12.23 | 11.97 |
| Olym Avg 93-97 | 12.01 | 11.36 | 11.72 | 12.01 | 11.57 | 11.65 | 11.62 |
| Olym Avg 92-96 | 11.45 | 10.73 | 11.08 | 11.32 | 10.88 | 10.97 | 10.89 |
| Olym Avg 91-95 | 11.26 | 10.49 | 10.90 | 10.99 | 10.64 | 10.72 | 10.61 |
| | | | | | | | |
| Probability of Total | - | | | | | | |
| Avg 96-00 | 0.64 | 0.88 | 0.99 | 0.76 | 0.91 | 0.80 | 0.90 |
| Avg 95-99 | 0.44 | 0.70 | 0.91 | 0.48 | 0.72 | 0.50 | 0.72 |
| Avg 94-98 | 0.36 | 0.66 | 0.80 | 0.43 | 0.59 | 0.49 | 0.65 |
| Avg 93-97 | 0.45 | 0.81 | 0.73 | 0.53 | 0.76 | 0.74 | 0.74 |
| Avg 92-96 | 0.74 | 0.99 | 0.95 | 0.86 | 0.97 | 0.96 | 0.97 |
| Avg 91-95 | 0.89 | 1.00 | 0.99 | 1.00 | 1.00 | 1.00 | 1.00 |
| Olym Avg 96-00 | 0.71 | 0.91 | 1.00 | 0.77 | 0.91 | 0.81 | 0.90 |
| Olym Avg 95-99 | 0.35 | 0.56 | 0.80 | 0.33 | 0.48 | 0.37 | 0.55 |
| Olym Avg 94-98 | 0.35 | 0.56 | 0.80 | 0.33 | 0.48 | 0.37 | 0.55 |
| Olym Avg 93-97 | 0.52 | 0.85 | 0.69 | 0.50 | 0.76 | 0.75 | 0.75 |
| Olym Avg 92-96 | 0.79 | 1.00 | 0.94 | 0.91 | 0.99 | 0.99 | 0.98 |
| Olym Avg 91-95 | 0.89 | 1.00 | 0.96 | 1.00 | 1.00 | 1.00 | 1.00 |
| Probability of Total | Receipts G | Greater that | n \$13/CWT | | | | |
| Avg 96-00 | 0.04 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Avg 95-99 | 0.10 | 0.01 | 0.00 | 0.06 | 0.01 | 0.04 | 0.01 |
| Avg 94-98 | 0.18 | 0.02 | 0.00 | 0.08 | 0.03 | 0.05 | 0.02 |
| Avg 93-97 | 0.10 | 0.00 | 0.01 | 0.04 | 0.01 | 0.01 | 0.01 |
| Avg 92-96 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Avg 91-95 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Olym Avg 96-00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Olym Avg 95-99 | 0.18 | 0.03 | 0.00 | 0.14 | 0.04 | 0.12 | 0.05 |
| Olym Avg 94-98 | 0.18 | 0.03 | 0.00 | 0.14 | 0.04 | 0.12 | 0.05 |
| Olym Avg 93-97 | 0.08 | 0.00 | 0.01 | 0.05 | 0.00 | 0.00 | 0.01 |
| Olym Avg 92-96 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Olym Avg 91-95 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | | | | | | | |

Total receipts includes market receipts, AMTA payments, Loan Deficiency Payments, and Counter Cyclical Payments calculated for the alternative base periods.