Commodity Value Enhancement Fund – Analysis

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Proposed Policy Framework

- Maintain the current structure of the FAIR Act with continued AMTA payments, planting flexibility and marketing loans.

- Designed to provide a counter-cyclical safety net for producers of wheat, feed grains, cotton, rice, oilseeds and dairy.

- Safety net components are designed to establish a "fund" for agriculture that is financed by an assessment on purchases at the retail market.

  - An assessment is made at the consumer level for all purchases that have any agricultural commodity as an ingredient in the final product.

  - The assessment is to be determined by applying a commodity value multiplier to the retail value of the commodity that assures a sustainable farm income level.

  - Distribute the collected funds based on the program commodities production level.

  - System designed to provide a safety net that will enhance current production agriculture while encouraging the free marketing nature of the FAIR Act.

Analytical Procedures and Considerations

In order to evaluate the consequences, several key pieces of information are necessary as this program is designed to provide an additional safety net in periods when either prices, or income, or both are at levels that subjects producers of program commodities to excessive financial pressure. In lieu of ad hoc emergency legislative assistance, this proposal would establish an escrow account funded by a special assessment imposed at the consumer level on retail products containing any food and fiber. Therefore, the first set of information required is the National Accounts on purchased food and fiber such that a clear picture can be drawn regarding the exact accounts to be assessed. This first issue also requires information on several food and fiber categories since these data are reported according to location of final consumption. For example, food purchases are made for home consumption, away from home that includes restaurants, institutions such as hospitals and special assistance programs like school lunches and food stamps.

The second issue of importance is the level of assessment. This is fairly straight forward if 2 things are known. First, a fairly clear statement of the average level of government funding necessary to prevent financial stress for the program crop producers, and second how frequent – how many times over a 10-year period is this situation likely to occur. For purposes of this analysis, national data on government expenditures will be used. As this proposal is intended to be a counter cyclical income safety net program, this information will shed light on the magnitude of pressure and at the same time provide information as to the likely frequency of

occurrence. This data will provide a better understanding of what government support has historically been. More importantly, it will provide an indication of the level of government support deemed necessary in years of financial stress to producers and agribusiness related to program commodity agriculture.

So in establishing the assessment we need to know how large the fund should be. The amount of government support to agriculture in a bad year is the first step, the second step is how often this might occur. Putting these two together yield a target for the magnitude of the fund. The final step is to assess the retail market to ensure the desired funding. This will be a simple multiplication (percentage) against the retail value of food and fiber from all agricultural products.

The third issue of importance is an allocation-distributing formula. A considerable amount of history and a more recent track record is available as examples. In the last 3 emergency funding appropriations, 1998-2000, Congress chose to distribute the funds based on historical AMTA payments adjusted for the addition of oilseeds and dairy.

Analysis

Consumer Expenditures for Food and Fiber

To frame the debate, aggregate expenditures as reported by Department of Commerce, Bureau of Economic Analysis for American consumers will be used as a reference for this analysis. Table 1, reflects this information. Total personal consumer expenditures in 1999 is reported to be $6,254.9 billion. Of this amount, $903 billion was spent on food and $306.2 billion was spent on clothing and shoes for a total of $1,209.2 billion. So about 20 percent of the consumer dollar is spent in accounts related to food and fiber at the retail level.

Obviously this number will increase over time. However, for this analysis, 1999 will be used as a reference point to demonstrate how the assessment process might work. As more information is gained on the size of the desired fund, then the formulas can be easily modified to reflect expected consumer expenditures as future years unfold.

Determination of the Assessment

In general, setting the fund level is a policy decision. In most cases a starting point for the policy debate is a target or level determined by examining the percent or probability of a bad year in agriculture. Second is the amount of government expenditure necessary to make up a percentage of the lost income.

Implicit in this calculation is the average or expected amount of government payments over a longer period of time. For purpose of this analysis, expenditures from 1986-2000 will be used as a reference point, figure 1. The period was selected as an example because it represents congressional intent in the last three farm bills. All three farm bills were enacted with an objective of maintaining export markets through reduced CCC non-recourse loan levels and the use of marketing loan deficiency payments.

In order to interpret information in figure 1 relative to financial pressure, it is clear that good years in agriculture generate little financial pressure and coincide with low government payments. On the other hand, pressure periods would require higher government payments as reflected in the late 80s, 1993, 1998, 1999 and 2000.

On average from 1986-2000, direct government payment to U.S. agriculture was $12.0 billion. The closest any one year came to this average was 1998 at $12.2 billion.

Agriculture is risky and in examining the chart over time, agriculture generally experiences more good than bad years. In good years government payments are below the average as expected. Bad years are less frequent, but cost the government considerably more money.

Production agriculture is inherently risky and the increasing involvement in a global community appears to have enhanced the risk. Therefore, the question becomes what is the likelihood of a bad year and more importantly how much above the average should the government safety net payment be in those years?

What reference point is the most logical for choosing the average government payment and what has been the variance?

As indicated previously, the 1985 Farm Bill, implemented in 1986, marked the beginning of an effort by Congress to significantly reduce price supports and allow U.S. production agriculture to compete in world markets. Marketing loans and a reduction in the CCC non-recourse loan rates were the primary tools in its objective.

So a logical reference point would start in 1986 and continue through the 1999 crop. This would reflect primarily FY 1986 through FY 2000. In this example, direct government payments averaged $12.0 billion over this period.

It is also apparent that there are more good years in agriculture than bad since 60% of the time government payments were below the $12.0 billion average indicating reasonably good returns to agriculture. But 40% of the time expenditures were above the average. In fact, 27% of the time payments were between $12 to $17 billion. And 13% of the time payments exceeded $17 billion – as indicated for 1999 and 2000. So when U.S. agriculture gets in trouble, it needs help that is considerably above the average. In the late 80's this amounted to support at the $14 to $16 billion level. While in the late 90's and 2000 the support reached into the low $20 billion range.

So how large should the funds be based on the 1986-2000 reference point? The first step involves estimating the expected level of direct government expenditures over the next ten years if the FAIR Act is continued at 2002 levels without any further emerging government ad hoc assistance. According to the FAPRI 2000 Baseline estimates, annual direct government expenditures would average approximately $8.5 billion annually over the 2001-2009 time period. This is about $3.5 billion below the longer run annual average of $12.0 billion reflected in figure 1 and used as our reference point.

If the desired longer run average is $12.0 billion, then the fund needs to compensate for this $3.5 billion deficiency between the current program and what is needed. AFPC is not proposing that the annual average government expenditures of $12.0 billion for the period 1986-2000 should be the reference point. It is used here only as one of many plausible targets.

Farm programs have generally supported the following objectives:

- Income - maintain adequate net farm income for livestock and crop farmers
- Food - maintain an adequate food supply at reasonable prices
- Exports - maintain a competitive trade position
- Conservation and environment - enhance environmental and conservation quality
- Inputs - maintain a viable input industry
- Reserves - adequate reserves in the event of crop production problems
- Rural areas - complimentary to the development of rural areas
- Government cost - achieve all objectives at the least cost to the government

The last objective is critical to this proposal. What should it cost to achieve the other 7 objectives? For the purpose of this analysis, this will be left for future debate. We use the average over 1986-2000 as one possible reference point for illustration.

Suppose that the FAPRI Baseline 2000 estimate is correct and the expected direct government expenditures to production agriculture costs approximately $8.5 billion per year from 2001-2009 under the provision of the current farm legislation. Is this a sufficient amount, will it protect agriculture in expected bad years? This answer is not known for certain, but a starting point is previous history. And if the next 9 years play out like the last 15, then agriculture will not likely receive the benefits offered in the past if average support is only $8.5 billion per year as estimated in the FAPRI 2000 Baseline.

This means that if the frequency and sequence of bad years are about the same as experienced from 1986 to 2000, then funding the average of only $8.5 billion annually will not be sufficient to provide the safety net generated in the past. It would be short the difference between the longer run historical average of $12.0 billion annually and the $8.5 billion annually projected for the next 9 years. So for any given year this expected difference is $3.5 billion, thus, for a 10 year period the assessment fund would have to make up $35 billion. If the fund is designed to compliment a 7 year farm bill contract, then an expected target would be $3.5 billion for each of the 7 years or $24.5 billion.

The reason for the above arithmetic is to start a bit more dialog on what reference points are to be used in establishing the size of the fund. If the desire is to sustain uncertainties over the next 10 years with an expected average government outlay of $12.0 billion per year and current projections imply spending of $8.5 billion, then a 7 year contractual farm bill would be short about $24.5 billion.

The assessment percentage can now be determined. Since the desired fund size over seven years is $24.5 billion and the level of consumer expenditures is $1,208 billion, then a one year assessment of 2% would be required to generate the fund large enough to support agriculture over a 7 year period.

Obviously, if the fund was assessed annually instead of once per 7 years, then everything is reduced in the assessment formula by the corresponding percentage. This would imply that an assessment of only 0.20% per year would be necessary to generate an extra $3.5 billion of support for the fund.

To be clear about the analysis, this fund is established as a counter cyclical buffer and is not intended for the total support of the farm program. For this reason, it is anticipated that the FAIR Act continues to provide a base and the assessment fund picks up the differential in a bad year. It should be noted that total government support in bad years has generally cost between $14 to $18 billion dollars.

Finally, using 1986 through 2000 as a guide, about 60% of the time (9 out of 15) government support was below $12 billion. But in difficult years, 40% of the time support was considerably above the average. A first level of pressure can easily take government support into the $14-16 billion range – about 27% of the time. In excessive pressure periods, government support can exceed $18 billion – about 13% of the time as reflected in 1999-2000.

Note that the statistics do not imply the necessity of additional support every year. Thus the safety net fund is only used in low price or income years which serves as a counter cyclical measure.

Distribution Formula

The formula used in this analysis is based on those used in the past three years of market loan assistance programs.

The pie chart reflects these percentages. Notice that 48.2% of the payments went to feed grains, wheat received 23.7%, oilseeds 7.8%, rice 7.7%, cotton 10.1% and dairy 2.5%.

Based on the percentages in the market loss assistance package, the money would be distributed as follows:

Wheat	23.7%
Corn	41.7%
Sorghum	4.5%
Barley	1.9%
Oats	0.1%
Cotton	10.1%
Rice	7.7%
Oilseeds	7.8%
Dairy	2.5%

Consideration

Implementation of this type program will require broad support from all special interest represented in the eight stated objectives. Since the fund is intended to support wheat, feed grains, cotton, rice, oilseeds and dairy then producers in these categories will certainly be compensated in stressful years. They are likely to be supportive.

But there are others sitting at the table that have been assessed. Fruits and vegetables make up a considerable amount of consumer expenditures as does other livestock products. Their products were assessed which will reduce the quantity sold and they received no direct benefits and this will certainly become a focus point in the debate. It is important, however, to remember that both groups receive substantial indirect benefit from the programs. The livestock sector is provided cheap grain. As a major input in the production of meat, this is very valuable. The fruits and vegetables sectors are specifically shielded from the flexibility provisions of the 1996 FAIR Act. Therefore, they too, benefit indirectly.

Consumers foot the bill as the assessment occurs at the retail level. Some groups may not be able to afford even a 0.20 percent increase in food and fiber costs. Others would hardly notice it. The equity of the assessment will be an issue as will the cost of collection.

Finally, and more importantly, is the issue of determining a fair and equitable annual allocation to agriculture that truly satisfies all objectives expected in a farm bill. This is a very crucial step in trying to focus on the desired size of a fund. And it is most critical that this allocation is in fact balancing. It could easily become distorting. If the allocation is too low then financially stressed farms will be left high and dry in bad years. If the allocation is set too high – lets say to support an average $20 billion per year, then distortions could be expected. Eventually this level of support would begin to find its way into land rent and land prices, and it is certain that OMB would take a dim view of this level of government budget exposure.

Could this type of program be achieved? If so, it will likely involve all players in the policy decision process, Congress, USDA, farmers and commodity organizations, consumer and retailers, input and processing industries and environmentalists. And behind all these negotiations will be analytical support to help measure likely outcomes as each level of support is defined.

Also of critical importance is the necessity for significant analytical capability as it will be necessary to project forward for several years, under risk, to try and establish expected support to agriculture in the future. This is conditional on staying the course with the current farm bill including all agreements with other countries around the world.

To move forward with this project will require broad acceptance at the national level to the extent that national leadership can focus the necessary attention on organization of interested parties and set priorities so that analytical units like AFPC, FAPRI and USDA can be requested to provide analysis.

Figure 1
Direct Government Payments

Figure 1 — Direct Government Payments (bar chart, Billion Dollars by year 1986–2002)

Year	Direct Payments (Billion Dollars)
1986	11.81
1987	16.75
1988	14.48
1989	10.89
1990	9.3
1991	8.22
1992	9.17
1993	13.4
1994	7.88
1995	7.25
1996	7.34
1997	7.5
1998	12.22
1999	20.59
2000	23.3
2001	12.42
2002	9.5

Legend:
- Direct Payments
- 1986-2000 Average = $12.01 Billion
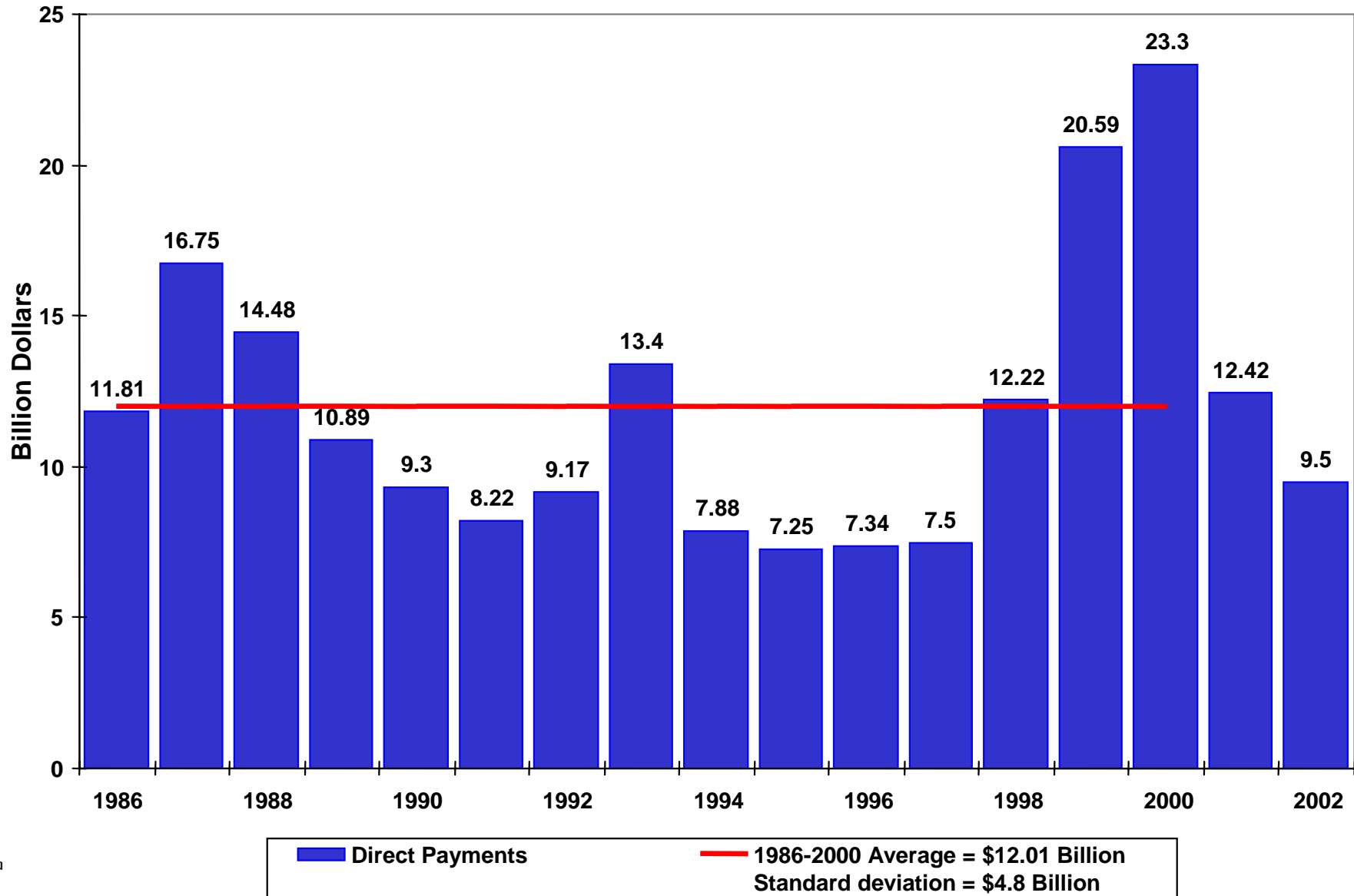- Standard deviation = $4.8 Billion

Table 1. Personal Consumption Expenditures, 1959-99 (Billions of dollars; quarterly data at seasonally adjusted annual rates).

Year or quarter	Personal consumption expenditures	Durable goods			Nondurable goods					Services					
		Total	Motor vehicles and parts	Furniture and household equipment	Total	Food	Clothing and shoes	Gasoline and Oil	Fuel oil and coal	Total	Housing	Household operation		Transportation	Medical care
												Total	Electricity and gas		
1959	318.1	42.7	18.9	18.1	148.5	80.7	26.4	11.3	4.0	127.0	45.0	18.7	7.6	10.5	16.4
1960	332.3	43.3	19.7	18.0	152.9	82.3	27.0	12.0	3.8	136.1	48.2	20.3	8.3	11.2	17.6
1961	342.7	41.8	17.8	18.3	156.6	84.0	27.6	12.0	3.8	144.3	51.2	21.2	8.8	11.7	18.7
1962	363.8	46.9	21.5	19.3	162.8	86.1	29.0	12.6	3.8	154.1	54.7	22.4	9.4	12.2	20.8
1963	383.1	51.6	24.4	20.7	168.2	88.3	29.8	13.0	4.0	163.4	58.0	23.6	9.9	12.7	22.6
1964	411.7	56.7	26.0	23.2	178.7	93.6	32.4	13.6	4.1	176.4	61.4	25.0	10.4	13.4	25.8
1965	444.3	63.3	29.9	25.1	191.6	100.7	34.1	14.8	4.4	189.5	65.4	26.5	10.9	14.5	27.9
1966	481.8	68.3	30.3	28.2	208.8	109.3	37.4	16.0	4.7	204.7	69.5	28.2	11.5	15.9	30.7
1967	508.7	70.4	30.0	30.0	217.1	112.5	39.2	17.1	4.8	221.2	74.1	30.2	12.2	17.3	33.9
1968	558.7	80.8	36.1	32.9	235.7	122.2	43.2	18.6	4.7	242.3	79.7	32.4	13.0	18.9	39.2
1969	605.5	85.9	38.4	34.7	253.2	131.5	46.5	20.5	4.6	266.4	86.8	35.2	14.1	20.9	44.8
1970	648.9	85.0	35.5	35.7	272.0	143.8	47.8	21.9	4.4	292.0	94.0	37.9	15.3	23.7	50.4
1971	702.4	96.9	44.5	37.8	285.5	149.7	51.7	23.2	4.6	320.0	102.7	41.3	16.9	27.1	56.9
1972	770.7	110.4	51.1	42.4	308.0	161.4	56.4	24.4	5.1	352.3	112.1	45.7	18.8	29.8	63.9
1973	852.5	123.5	56.1	47.9	343.1	179.6	62.5	28.1	6.3	385.9	122.7	50.2	20.4	31.2	71.5
1974	932.4	122.3	49.5	51.5	384.5	201.8	66.0	36.1	7.8	425.5	134.1	56.0	24.0	33.3	80.4
1975	1030.3	133.5	54.8	54.5	420.7	223.2	70.8	39.7	8.4	476.1	147.0	64.3	29.2	35.7	93.4
1976	1149.8	158.9	71.3	60.2	458.3	242.5	76.6	43.0	10.1	532.6	161.5	73.1	33.2	41.3	106.5
1977	1278.4	181.2	83.5	67.2	497.2	262.7	84.1	46.9	11.1	600.0	179.5	82.7	38.5	49.2	1222.6
1978	1430.4	201.7	93.1	74.3	550.2	289.6	94.3	50.1	11.5	678.4	201.7	92.1	43.0	53.5	140.0
1979	1596.3	214.4	93.5	82.7	624.4	324.7	101.2	66.2	14.4	757.4	226.5	101.0	47.8	59.1	158.1
1980	1762.9	214.2	87.0	86.7	696.1	356.0	107.3	86.7	15.4	852.7	255.1	114.2	57.5	64.7	181.2
1981	1944.2	231.3	95.8	92.1	4758.9	383.5	117.2	97.9	15.8	954.0	287.7	127.3	64.8	68.7	213.0
1982	2079.3	240.2	102.9	93.4	787.6	403.4	120.5	94.1	14.5	1051.5	313.0	143.0	74.2	70.9	239.3
1983	2286.4	281.2	126.9	106.6	831.2	423.8	130.9	93.1	13.6	1174.0	338.7	157.6	82.4	79.4	267.9
1984	2498.4	326.9	152.5	119.0	884.7	447.4	142.5	94.6	13.9	1286.9	370.3	169.8	86.5	90.0	294.6
1985	2712.6	363.3	175.7	128.5	928.8	467.6	152.1	97.2	13.6	1420.6	406.8	182.2	90.8	100.0	322.5
1986	2895.2	401.3	192.4	143.0	958.5	492.0	163.1	80.1	11.3	1535.4	442.0	188.9	89.2	107.3	346.8
1987	3105.3	419.7	193.1	153.4	1015.3	515.3	174.4	85.4	11.2	1670.3	476.4	196.9	90.9	118.2	381.8
1988	3356.6	450.2	206.1	163.6	1082.9	553.5	185.5	87.7	11.7	1823.5	511.9	208.4	96.3	129.9	429.9
1989	3596.7	467.8	211.4	171.4	1165.4	591.9	198.9	97.0	11.9	1963.5	546.4	221.3	101.0	136.6	479.2
1990	3831.5	467.6	206.4	171.4	1246.1	636.9	204.1	107.3	12.9	2117.8	585.6	227.6	101.0	141.8	540.6
1991	3971.2	443.0	182.8	171.5	1278.8	657.6	208.7	102.5	12.4	2249.4	616.0	238.6	107.4	142.8	591.0
1992	4209.7	470.8	200.2	178.7	1322.9	669.3	221.9	104.9	12.2	2415.9	641.3	248.3	108.9	155.0	652.6
1993	4454.7	513.4	222.1	192.4	1375.2	697.9	231.1	106.6	12.9	2566.1	666.5	268.9	118.6	166.2	700.6
1994	4716.4	560.8	242.3	211.2	1438.0	728.2	240.7	109.0	13.5	2717.6	704.7	284.0	119.8	180.9	737.3
1995	4969.0	589.7	249.3	225.0	1497.3	755.8	247.8	113.3	14.1	2882.0	740.8	298.1	122.5	197.7	780.7
1996	5237.5	616.5	256.3	236.9	1574.1	786.0	258.6	124.2	15.6	3047.0	772.5	317.3	128.7	214.2	814.4
1997	5524.4	642.9	263.1	249.5	1641.7	817.0	271.2	126.2	15.2	3239.8	809.8	332.7	130.4	234.4	850.2
1998	5848.6	698.2	289.2	268.7	1708.9	853.4	286.3	112.9	13.2	3441.5	855.9	346.9	128.1	245.2	894.3
1999	6254.9	758.1	315.9	290.2	1841.1	903.0	306.2	123.3	14.8	3655.7	902.8	362.6	130.4	254.9	941.3
1994: I	4613.8	546.2	241.4	202.1	1409.7	714.6	237.2	105.7	14.5	2657.9	690.7	275.3	121.3	174.3	723.4
II	4677.5	553.6	239.0	208.6	1425.1	725.4	237.9	104.8	12.9	2698.8	700.1	287.5	123.3	179.1	732.3
III	4753.0	563.2	240.2	214.3	1449.9	733.1	241.5	111.5	13.8	2739.8	709.6	286.7	118.7	183.1	741.5
IV	4821.3	580.0	248.8	219.9	1467.2	739.6	246.3	113.8	13.0	2774.0	718.6	286.4	115.9	186.9	752.0
1995: I	4868.6	578.2	245.0	220.4	1475.8	745.5	244.5	113.9	13.2	2814.7	727.7	287.8	116.2	190.4	767.6
II	4943.7	584.4	248.2	221.9	1492.2	753.6	246.0	114.3	14.4	2867.1	736.9	295.7	121.8	195.5	776.2
III	5005.2	596.2	252.3	227.0	1502.6	458.8	249.3	112.7	14.2	2906.3	744.9	304.6	127.3	200.8	784.8
IV	5058.4	600.0	251.7	231.0	1518.5	765.3	251.2	112.2	14.6	2939.9	753.7	304.2	124.7	204.2	794.3
1996: I	5130.5	606.4	256.3	230.4	1539.6	773.9	253.0	117.7	16.1	2984.4	760.4	314.6	131.3	206.5	798.2
II	5218.0	621.3	259.2	238.2	1569.4	781.8	259.0	127.0	15.1	3027.4	768.1	318.3	130.0	211.7	810.7
III	5263.7	616.7	255.4	237.7	1578.8	788.8	259.3	123.3	15.0	3068.2	776.6	313.4	124.6	215.9	817.9
IV	5337.9	621.5	254.2	241.2	1608.4	799.3	263.0	128.6	16.0	3107.9	785.1	322.7	129.1	222.6	831.0
1997: I	5430.8	636.1	262.6	244.3	1630.5	812.0	267.3	130.4	15.5	3164.2	794.5	324.7	128.8	228.5	837.7
II	5466.3	627.8	253.0	247.0	1627.1	811.9	267.3	123.5	15.5	3211.4	804.5	328.4	128.5	232.7	845.9
III	5569.1	651.9	269.1	251.4	1652.3	821.9	274.5	125.2	15.2	3265.0	814.7	333.7	128.9	236.5	854.9
IV	5631.3	655.8	267.8	255.1	1657.1	822.2	275.7	125.6	14.7	3318.5	825.4	344.0	135.2	239.7	862.4
1998: I	5714.7	679.2	278.6	263.1	1674.6	832.9	282.5	117.5	13.5	3360.9	837.5	336.1	123.6	242.1	877.7
II	5816.2	693.9	288.2	265.8	1701.2	847.6	287.1	114.1	13.6	3421.1	850.0	348.0	131.4	244.9	890.1
III	5889.6	696.9	285.6	270.6	1716.6	857.6	286.6	111.8	13.4	3476.1	861.8	356.0	134.6	246.2	899.0
IV	5973.7	722.8	304.4	275.3	1742.9	875.6	289.2	108.3	12.6	3505.0	874.3	347.3	122.9	247.7	910.5
1999: I	6090.8	739.0	306.8	283.8	1787.8	885.4	301.8	106.5	13.7	3564.0	885.6	356.2	128.3	250.3	922.5
II	6200.8	751.6	313.8	287.3	1824.8	893.4	306.7	121.7	14.6	3624.3	897.3	360.3	129.4	254.0	933.0
III	6303.7	761.8	318.1	292.0	1853.9	903.9	308.1	129.3	15.4	3688.0	907.6	366.8	133.8	256.5	948.1
IV	6424.6	780.1	324.7	297.9	1897.7	929.4	308.4	135.7	15.4	3746.7	920.6	367.0	130.2	258.9	961.6

Figure 2
<u>Market Loss Assistance</u>

- Market Loss Assistance payments are allocated based on percentages from the previous assistance packages.

- Feed grains receive 50% of the money under these rules.

Allocation of MLA Payments

Oilseeds 7.8%

Rice 7.7%

Wheat 23.7%

Cotton 10.1%

Dairy 2.5%

Feed Grains 48.2%