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AE 95012

December 20, 1995

**THE IMPACTS OF THE BUDGET
RECONCILIATION PROPOSAL ON
NORTH DAKOTA REPRESENTATIVE FARMS**

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Executive Summary

- * The Budget Reconciliation Proposal proposes to save \$12 billion in farm program costs over seven years. This would include \$2.4 billion to come from as yet somewhat undefined changes in Dairy, Peanuts, and EEP Programs.
- * The FAPRI Baseline used in this analysis takes into account strong agricultural commodity prices for 1995 and the prospect of still strong, though somewhat lower, prices in 1996.
- * Net farm income for the average representative farm, under the Budget Reconciliation Proposal falls from \$56,696 in 1993-94 to \$45,356 in the year 2001 before recovering to \$49,165 in the year 2003.
- * Changes in the level of FAPRI forecast prices would have a similar effect on net farm income under either the Budget Reconciliation Proposal or the Freedom to Farm proposal evaluated in an earlier report.
- * If the FAPRI forecast price level were to increase by 20%, net farm income under both the Freedom to Farm and the Budget Reconciliation proposals would be much higher than under the 30% Normal Flex proposal.
- * Under the 30% Normal Flex proposal, if the forecast price level were to decline by 20%, net farm income for the average representative farm would decline by less than 20 percent. However, under both the Freedom to Farm and the Budget Reconciliation proposals, net farm income would decline by substantially more than 20%.
- * Only in the case of the 20 percent low profit group of representative farms does the debt-to-asset ratio rise to a level, 0.62, at which lenders likely would require federal loan guarantees on new borrowing by those farms. Thus, as in previous policy alternative analyses, the brunt of the adjustment pain will be borne by the 20 percent low profit group of representative farms.
- * Cropland prices paid by the average representative farm would rise from 1993 to 1997, then fall for the balance of the forecast period. Prices in 2003 would be \$96 below the level of 1993.
- * Cash rental rates paid by the average representative farm would increase through 1999 as a result of higher commodity prices in 1995-96. Cash rental rates would fall thereafter, ending the forecast period about \$1 less per acre than in 1993.

THE IMPACTS OF THE BUDGET RECONCILIATION PROPOSAL ON NORTH DAKOTA REPRESENTATIVE FARMS

By

Won W. Koo, Marvin Duncan, Richard D. Taylor, and Dwight Aakre*

The main objective of this analysis was to estimate the impact of The Budget Reconciliation Proposal on the net income, cropland prices, cash rental rates, and debt-to-asset ratios of representative farms selected from the North Dakota Farm and Ranch Business Management Association farm records. The secondary objective of this analysis was to estimate the reaction of net farm income to changes in the general price level of commodities, under the Budget Reconciliation, Freedom to Farm, and 30% Normal Flex proposals.

The Budget Reconciliation Proposal would reduce spending for government farm programs from its 1995 approved outlay level of \$14 billion to levels that would achieve a savings of \$9.6 billion over a seven-year period beginning in 1996. FAPRI assumes \$2.4 billion in budget savings to be obtained from the Dairy, Peanuts, and EEP Programs for a total budget savings of \$12.0 billions.

The Budget Reconciliation Proposal decouples farm program payments from production by establishing a seven year decreasing annual payment from a fixed pool of funds. Marketing loans at 70 percent of the preceding 5 year national average cash price will be available. ARP is eliminated and conservation compliance is continued. CRP funding is maintained but renewals of contracts will be at rental rates no higher than 75% of current rates. However, farmers holding CRP contracts would be able to withdraw land from participation in the program without penalty and on limited notice to the government after the third year of the contract.

Procedure

This analysis is based on the North Dakota Representative Farm and Ranch Model which uses the FAPRI price projections as an input. The model has 12 representative farms, three farms in each of four regions: the Red River Valley (RRV), North Central (NC), South Central (SC), and Western (WEST). The farms in each region are representative of the average, high, and low profit farms enrolled in the North Dakota Farm and Ranch Business Management Association. The representative farms are developed from the North Dakota Vocational Agriculture Department farm record system data provided by cooperating North Dakota farmers.

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Table 1. Characteristics of Average Representative Farms in North Dakota

	RRV	NC	SC	WEST
	-----acres-----			
Cropland	1234	1181	1369	1017
Owned land	217	385	504	489
Wheat	550	733	706	625
Barley	162	217	142	90
Sunflower	66	61	136	0
Corn	77	0	43	0
Soybeans	244	0	37	0
Sugar beet	55	0	0	0
Pasture	23	340	351	927

This study focused on differences in net farm income, cropland prices, cash rental rates, and farm debt-to-asset ratios for high, average, and low profit farms. Changes in cropland prices and cash rental rates are for land used to produce five major crops: wheat, barley, corn, soybeans, and sunflowers under the alternative farm program options.

Characteristics of average representative farms in each region are shown in Table 1. The average representative farm is an average of all farms in the Farm and Ranch Management Records program for the state or for each production region. The high profit representative farm is an average of farms in the top 20 percent of farm profitability for the state or for each production region. The low profit representative farm is an average of farms in the low 20 percent of farm profitability for the state or for each production region.

Net farm income per farm, cropland prices per acre, and cash rental rates for the high, average, and low profit representative farms are calculated by using the North Dakota Representative Farm model operational at the Department of Agricultural Economics, Agricultural Experiment Station, North Dakota State University (Analysis of Alternative Farm Programs).

It is assumed that the farm equipment stock remains constant in the analysis. In other words, depreciation allowances are assumed to be invested back into farm equipment. A market determined capitalization rate is used in calculating cropland prices. Changes in residual income attributable to cropland determine the prices based on a weighted four-year moving average. Changes in cropland prices determine cash rental rates charged for rented cropland based on the market determined relationship of cropland prices to cash rental rates. Cash rental rates adjust on a three-year moving average of cropland prices.

This study assumed that net farm income from livestock operations and production of other crops, including sugar beets, remained constant during the forecast period.

Analyses of alternative farm policy options are reflected in changes in net farm income and cropland prices for the representative farms. These changes in turn affect the debt-to-asset ratios of the representative farms and the cash rental rates for cropland used in production of wheat, barley, corn, soybeans, and sunflowers.

Lower farm income is reflected in reduced allocation of income to owned cropland used in production of the crops in the analyses. Reduced allocation of income to cropland, given the market determined capitalization rate, results in lowered land prices. Reduced land prices result in lower cash rental rates farmers are willing to pay for cropland used in production of the crops in the analyses. Withdrawal for family living and reductions in owned cropland prices reduce farm asset levels, resulting in an increase of debt-to-asset ratios for representative farms.

The FAPRI updated projected commodity prices (December 6, 1995) for the Budget Reconciliation Proposal are used in these analyses. The representative farm model is used to determine net farm income, land prices, cash rental rates, and farm debt-to-asset ratios under alternative spending caps.

Results

Net Farm Income for Representative Farms

Figure 1 shows the state average net farm income for the representative farms under the alternative spending program. Under the Reconciliation Proposal, the average net farm income falls from \$56,696 in 1993-94 to \$45,356 in 2001, but recovers to \$49,165 in 2003. Table 4 shows the net farm income under the Budget Reconciliation Proposal for North Dakota for the average profit representative farm. Figure 1 shows the increase in net income due to the stronger prices in 1995. FAPRI's price projections for 1996 are higher than the long term average, but are lower than prices in 1995. Table 2 shows that in all regions, net farm income is lower in 2003 than in 1993-94.

Figure 2 illustrates the impacts of changes in the net farm income for the average profit representative farm as percentage increases or decreases occur in the FAPRI Base forecast for commodity prices. The level of net farm income is different for each of the three policy alternatives, Budget Reconciliation, 30% Normal Flex, and Freedom to Farm, since FAPRI Baseline price forecasts were not identical across these three alternatives.

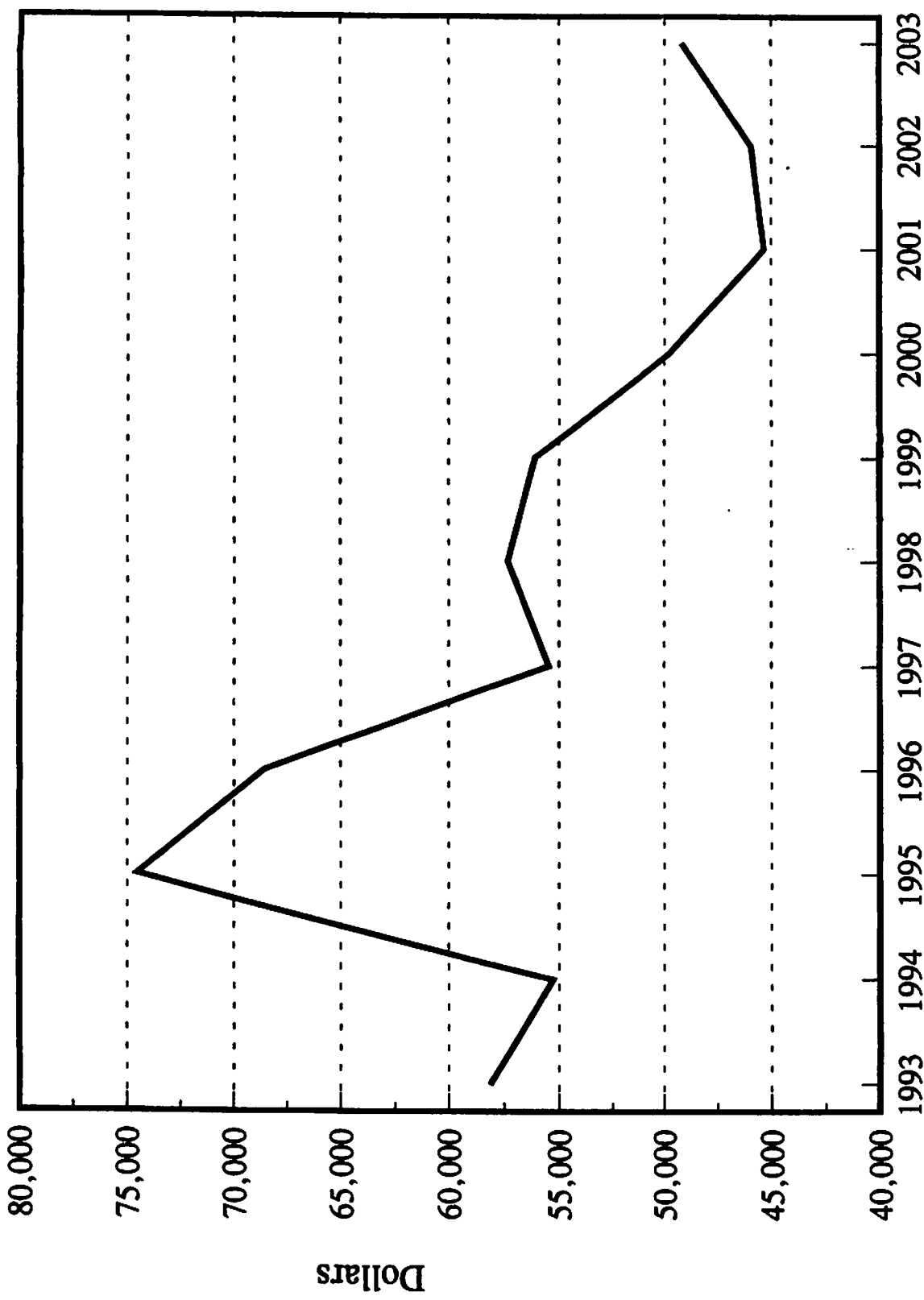


Figure 1. Net farm income per average representative farm under the Budget Reconciliation proposal

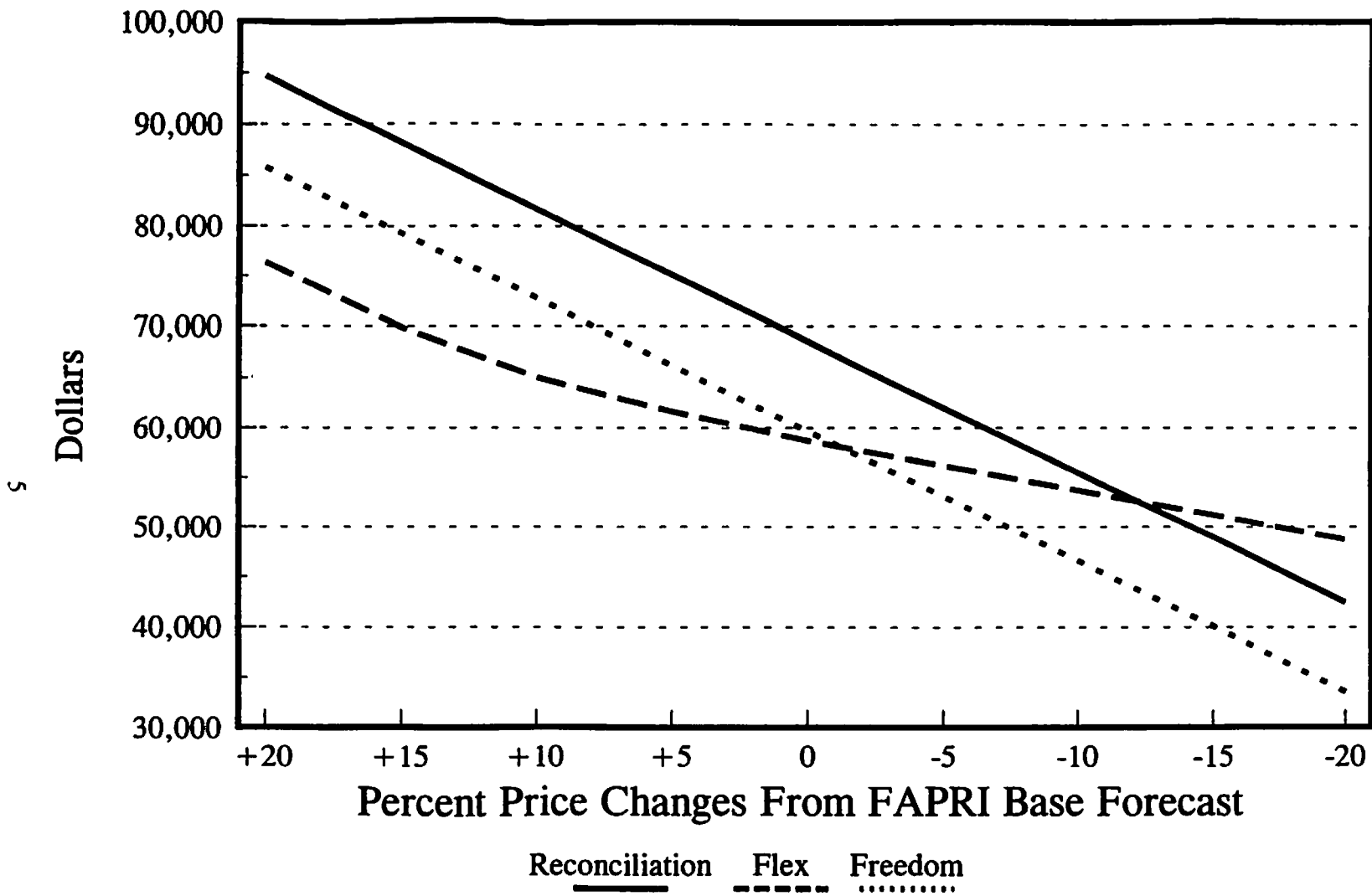


Figure 2. Adjustments in net farm income per average representative farm with different price changes under alternative farm proposals

Table 2. Net Farm Income Under the Budget Reconciliation Proposal

	RRV			NC			State
	High	Avg	Low	High	Avg	Low	Average
1993	114105	48898	-25328	103650	69289	33584	58125
1994	104903	41670	-35432	103483	68873	32947	55267
1995	135158	64434	-8657	136175	90159	46492	74534
1996	133604	62741	-11523	122616	81448	40903	68563
1997	115108	48687	-29211	103156	68597	32390	55458
1998	114579	47689	-34528	111284	73571	34856	57316
1999	109724	43510	-43349	112016	73706	34383	56079
2000	102865	37718	-51707	100943	66305	29584	49755
2001	99059	34181	-56702	93717	61376	26379	45342
2002	100766	34217	-59146	95815	62348	26640	45956
2003	109212	39430	-54342	100557	65154	28248	49165
Average (1995-2000)	115176	48069	-34064	110003	72726	34423	57434
Average (1995-2003)	110615	43522	-42564	105013	69063	31673	53454

	SC			West		
	High	Avg	Low	High	Avg	Low
1993	107481	53355	5374	86266	60959	20284
1994	102731	49969	2681	85939	60556	19743
1995	130888	68876	13939	108140	74668	26865
1996	121691	62199	9229	95989	67863	23372
1997	99627	46960	-784	80084	57587	17901
1998	102768	48304	-1655	83682	59700	18319
1999	102527	47715	-3167	83698	59385	17697
2000	90734	41057	-7781	75584	53938	14732
2001	85606	35904	-11494	69828	49905	12449
2002	88251	37278	-11836	70543	49984	11963
2003	93098	40346	-10701	73725	51728	12497
Average (1995-2000)	103469	49247	-832	83807	59694	18404
Average (1995-2003)	98038	44970	-4774	79141	56261	16116

However, changes in net farm income are the same under both the Budget Reconciliation and the Freedom to Farm proposals across the different percentage changes in the FAPRI Baseline price forecast. This is indicated by identical slopes to the net profit lines for the two proposals.

Changes in net farm income are different for the 30% Normal Flex proposal. This is true because the net farm income changes under this proposal are moderated by deficiency payments paid to farmers as commodity prices fall below target prices.

Under the Budget Reconciliation and Freedom to Farm proposals target prices and deficiency payments are eliminated. Instead, farmers receive a "transition" payment that declines over the seven year duration of either proposal. The size of that transition payment is unrelated to commodity price changes.

Under the Budget Reconciliation proposal price volatility in a year when net farm income is high will have a less severe impact than the same percentage of volatility when net farm income is low.

Debt-to-Asset Ratios for Representative Farms

Figure 3 indicates the debt-to-asset ratio forecast for the high, average, and low profit representative farms under the Budget Reconciliation Proposal. The debt-to-asset ratio for the average profit representative farm was 0.37 at the start of the forecast period 1995-2003. The debt-to-asset ratio falls for several years because of higher net farm income. By 1999 the debt-to-asset ratio rises to 0.40 and continues to rise ending the forecast period to 0.46. The debt-to-asset ratio for the high profit representative farm follows the same pattern but the starting point is 0.29 and the ending point is nearly 0.33. However, in the case of the low profit representative farm, the debt-to-asset is at 0.55 at the start of the forecast period but rises to 0.62 at the end of the forecast period. Lenders might require federal loan guarantees on new borrowing by the low profit representative farm by the end of the forecast period. Table 3 indicates the debt-to-asset ratios for high, average, and low profit farms under the Budget Reconciliation Proposal.

Average Crop Land Prices

Figure 4 indicates the average price the North Dakota average profit representative farm would be willing to pay for cropland on which to produce wheat, barley, corn, soybeans, and sunflowers. Recall that cropland prices are adjusted in the representative farm model on the basis of a weighted four-year moving average of the return to cropland. Cropland prices the average representative farm is willing to pay increase until 1997, because of higher net

Table 3. North Dakota Debt-to-Asset Ratio Under the Budget Reconciliation Proposal, State Average

	High	Ave	Low
1993	0.29	0.40	0.55
1994	0.29	0.41	0.56
1995	0.27	0.37	0.51
1996	0.27	0.37	0.52
1997	0.28	0.39	0.54
1998	0.28	0.39	0.54
1999	0.29	0.40	0.55
2000	0.30	0.42	0.58
2001	0.32	0.44	0.60
2002	0.33	0.46	0.62
2003	0.33	0.46	0.62

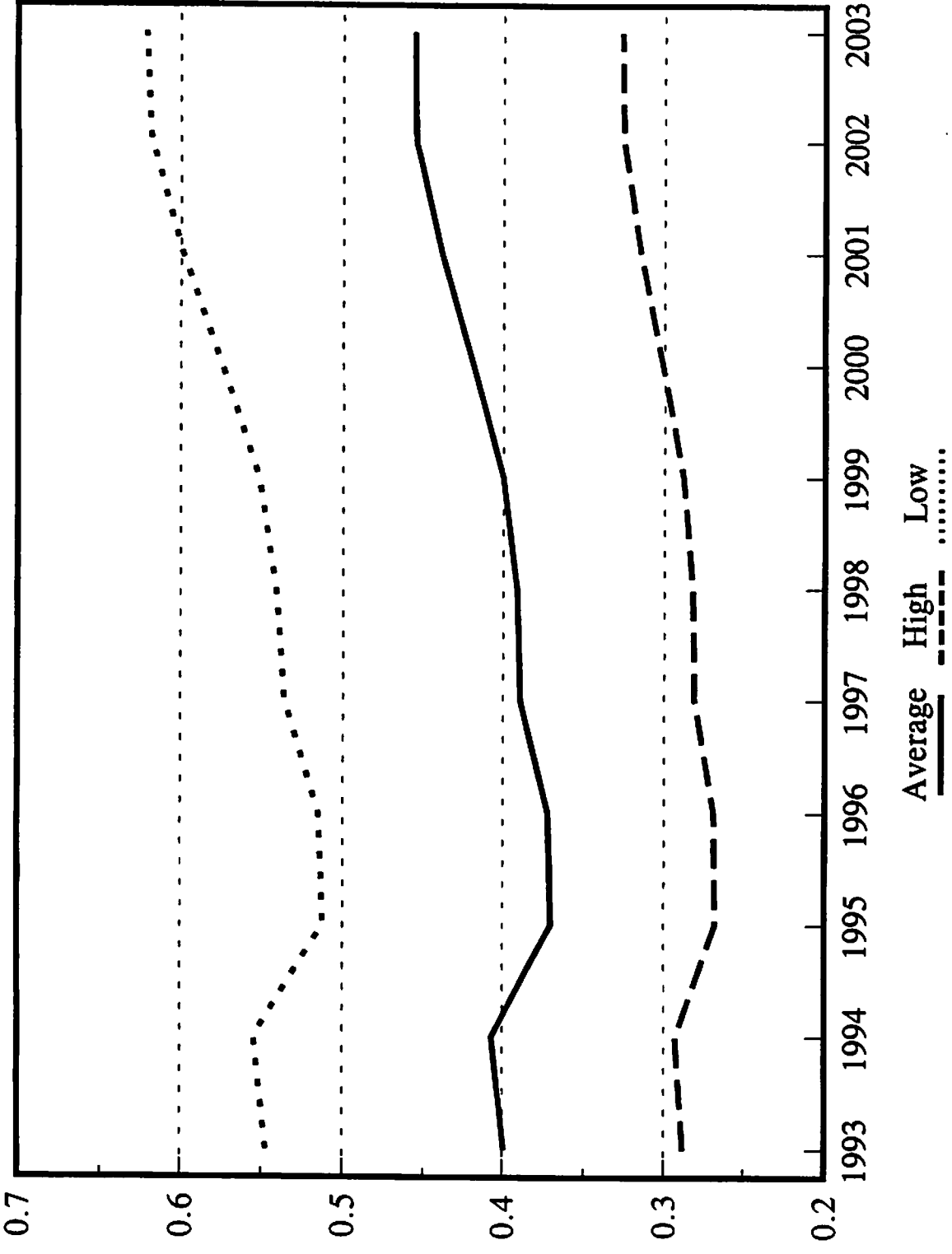


Figure 3. Debt/asset ratio for average profit representative farm under the Budget Reconciliation proposal

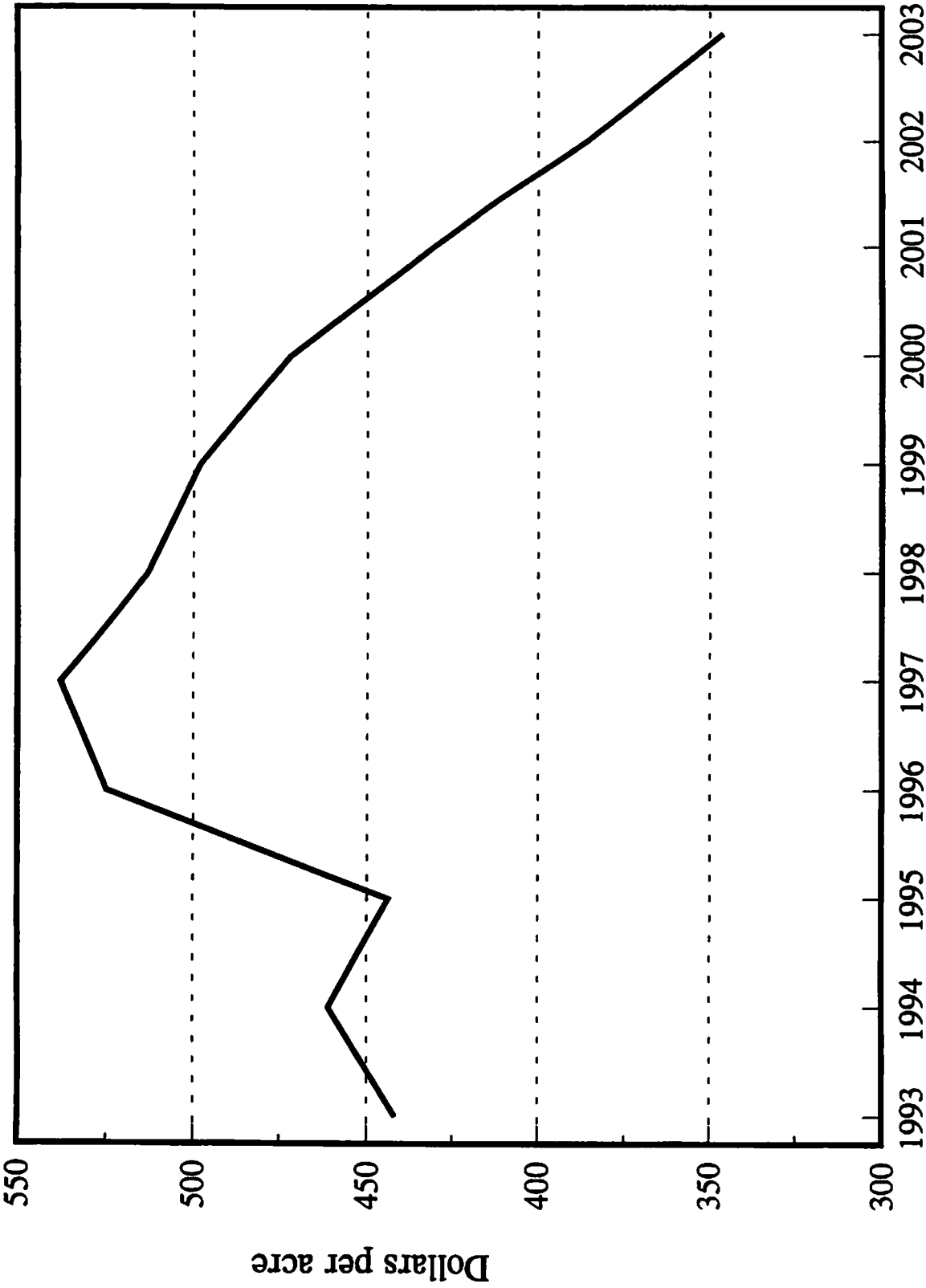


Figure 4. Average prices of cropland for average representative farm under the Budget Reconciliation proposal

Table 4. Land Prices Under The Budget Reconciliation Proposal

	RRV	NC	SC	WEST	State Average
1993	785	367	355	262	442
1994	788	370	420	268	461
1995	741	368	401	265	444
1996	855	433	495	317	525
1997	888	437	511	318	538
1998	861	416	478	296	513
1999	835	409	462	286	498
2000	787	399	434	270	472
2001	710	379	389	246	431
2002	636	354	338	218	386
2003	566	333	294	192	346
Average (1995-2000)	845	419	476	297	509
Average (1995-2003)	767	395	425	268	464

farm income in 1995 and 1996. Table 4 indicates the cropland prices the average representative farm would be willing to pay under the Budget Reconciliation Proposal. All regions in the state follow the same pattern. Prices increase during 1996 and 1997, and then to fall throughout the balance of the forecast period.

Cash Rental Rates

Figure 5 indicates cash rental rates the average representative farm would be willing to pay for cropland on which to produce wheat, barley, corn, soybeans, and corn. Cash rental rates increase through 1999 as a result of higher farm commodity prices in 1995 and 1996. Thereafter, cash rental rates fall throughout the balance of the forecast period. Under the Budget Reconciliation Proposal, the cash rental rate is \$1 lower by the end of the forecast period compared to the beginning of the period. Recall that cash rental rates in the representative farm model are based on a three-year moving average of cropland prices and an assumption that the representative farm does not change the proportion of cropland prices paid in cash rent. Table 5 indicates the cash rental rates the average profit representative farm would be willing to pay. Cash rent increases until 1999, then it falls throughout the balance of the forecast period.

Conclusion

The Budget Reconciliation Proposal is similar to the Freedom to Farm proposal in that it also decouples farm program payments from production. It provides decreasing payments based on a fixed pool of funds. Marketing loans at 70 percent of the preceding 5 year national average cash price are available. Net farm income initially rises in response to higher commodity prices, but generally declines after 1995. By 2003 net farm income again increases to a level about \$5,000 less than in 1993-1994.

The changes in net income for The Budget Reconciliation Proposal are similar to the changes in net income for the Freedom to Farm proposal as the FAPRI Baseline prices are increased or decreased. The changes in net farm income are less under the 30% Normal Flex proposal. The government assumes some of the price risk with the 30% Normal Flex proposal, reducing the price risk born by producers.

The debt-to-asset ratios for high, average, and low profit representative farm follow similar patterns. The debt-to-asset ratio for the low profit farms rises to 0.62 at the end of the forecast period. At that level, lenders might require federal loan guarantees on new borrowing by the low profit representative farm.

Prices the average representative farm is willing to pay for cropland rise from \$450 in 1993-1994 to \$538 in 1997, but then fall to \$346 by 2003. Cash rent for cropland also rises early in the forecast period. In 1993-1994, the state average cash rent is \$36, by 1999 it has increased to \$43. In 2003, cash rent is \$35.

Table 5. Cash Rent Under the Budget Reconciliation Proposal

	RRV	NC	SC	WEST	State
	-----dollars/acre-----				
1993	55	29	31	31	36
1994	55	29	31	31	36
1995	55	29	33	31	37
1996	54	29	35	31	38
1997	56	31	39	34	40
1998	58	33	44	37	43
1999	61	34	43	36	43
2000	61	34	41	34	42
2001	58	32	39	32	40
2002	55	31	36	30	38
2003	50	30	31	27	35
Average & Change (1995-2003)	-0.10	0.02	-0.06	-0.12	-0.07

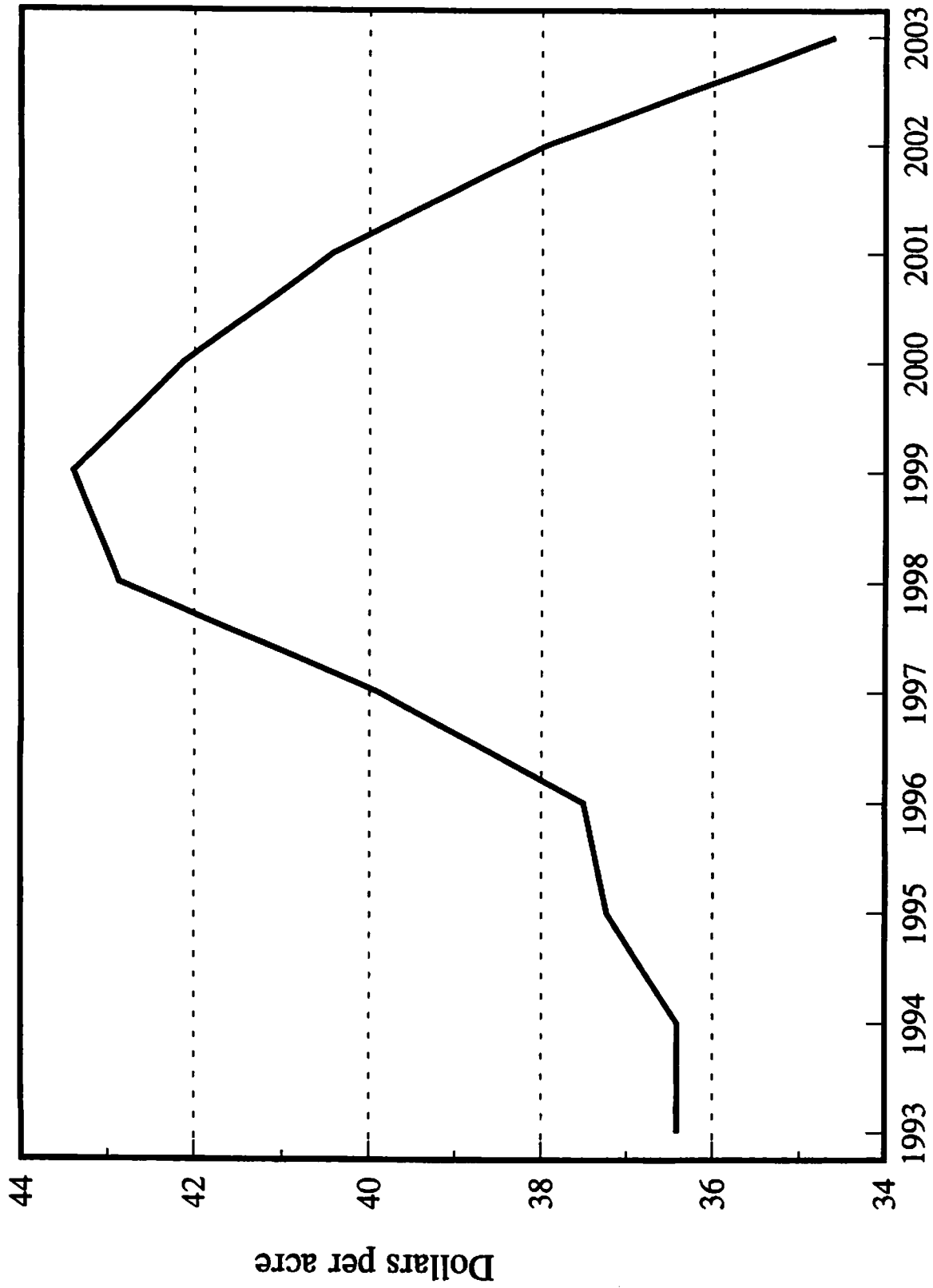


Figure 5. Cash rent paid by average representative farm under the Budget Reconciliation proposal