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Economic Analysis of Alternative Farm Bill Proposals

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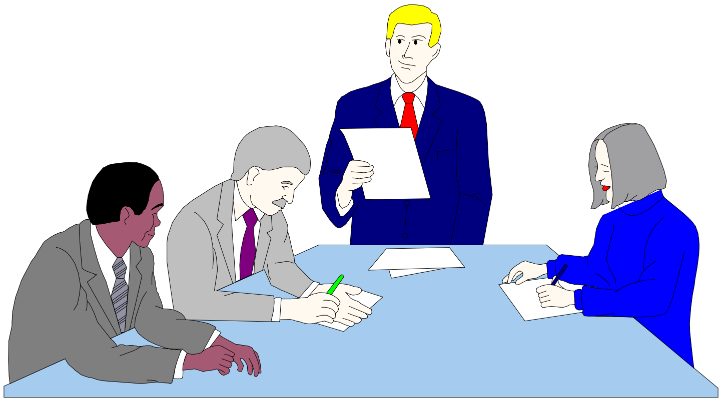

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Abstract

Various farm organizations and political parties are taking sides on whether the FAIR Act needs to be scraped or just modified. This study analyzes three such proposals: the U.S. House of Representatives proposal (H.R. 2646), the American Farm Bureau proposal, and the National Farmers Union proposal. The continuation of the FAIR Act is also included as an another alternative. The H.R. 2646 and the American Farm Bureau proposals are modifications of the FAIR Act while the National Farmers Union proposal is a totally redesigned bill.

The H.R. 2646 and the Farm Bureau proposals are very similar in their results. They provide higher net farm income for the large size farm than the Farmers Union proposal does early in the forecast period, but the Farmers Union proposal provides higher net farm income in the last three years of the time period. The Farmers Union proposal provides higher net farm income for the medium and small size farm than either the H.R. 2646 or the Farm Bureau proposals because of the targeting feature. The FAIR Act provides less net farm income for all size farms than any other proposal.

Key Words: Farm Bill, Targeting, North Dakota Representative Farms, H.R. 2646, National Farmers Union, American Farm Bureau

Highlights

Net farm income for the large size farm declines from $115 thousand in 2003 for the H.R. 2646 proposal and $114 for the Farm Bureau proposal to $99 thousand and $94 thousand in 2008-2009, respectively. Net farm income for the medium size farms declines from $64 thousand to $58 thousand for the H.R. 2646 proposal and $66 thousand to $55 thousand under the Farm Bureau proposal. Net farm income for the small size farm slowly declines from $29 thousand to $27 thousand under the H.R. 2646 proposal and $30 thousand to $29 thousand under the Farm Bureau proposal. Net farm income increases slightly from 2009 to 2010 for all farm sizes under the H.R. 2646 and the Farm Bureau proposals.

For the Farmers Union proposal, net farm income for the large size farm remains in the $100-102 thousand range; for the medium size farm, net farm income remains in the $68-72 thousand range; and for the small size farm, net farm income remains in the $33-34 thousand range throughout the forecast period.

For the FAIR Act, net farm income for the large size farm is predicted to be $83 thousand in 2003 and increase to $91 thousand in 2010. Net farm income for the medium size farm is predicted to be $48 thousand in 2003 and increase to $53 thousand by 2010. Net farm income for the small size farm in 2003 is predicted to be $24 thousand and increase to $26 thousand in 2010.

Debt-to-asset ratio for the large size farm in 2003 is predicted to be 0.33 under both the H.R. 2646 and the Farm Bureau proposals. It falls to 0.31 under the H.R. 2646 proposal and remains almost level for the Farm Bureau proposal. Debt-to-asset ratio for the medium size farm in 2003 is predicted to be 0.44 and remains level under both the H.R. 2646 and the Farm Bureau proposals. Debt-to-asset ratio for the small size farm in 2003 is predicted to be 0.56 under both the H.R. 2646 and the Farm Bureau proposals and rises slowly to 0.58 and 0.59, respectively.

For the Farmers Union proposal, debt-to-asset ratio for the large size farm in 2003 is predicted to be 0.34 and falls to 0.31 in 2009. Debt-to-asset ratio is predicted to be 0.44 and falls to 0.43 for the medium size farm, and is 0.57 in 2003 for the small size farm and falls to 0.55 in 2009.

Debt-to-asset ratio for the large size farm under the FAIR Act is predicted to be 0.36 in 2003 and increases to 0.37. Debt-to-asset ratio for the medium size farm in 2003 is predicted to be 0.45 under the FAIR Act and increases to 0.47 in 2008. Debt-to-asset ratio for the small size farm in 2003 is predicted to be 0.58 under the FAIR Act and increases to 0.60 in 2006 and then remains stable.

Land value increases from $456 per acre in 2003, for both the H.R. 2646 and the Farm Bureau proposals, to $523 per acre for the H.R.2646 proposal and $521 per acre for the Farm Bureau proposal. Land value increases from $456 per acre in 2003 to $545 per acre in 2010 for the Farmers Union Proposal. Land value increases from $456 per acre in 2003 to $477 per acre in 2010 under the continuation of the FAIR Act.

Cash rents increase from $34.63 per acre in 2003 to $39.75 per acre in 2010 for the H.R.2646 proposal and $39.62 per acre under the Farm Bureau proposal in 2010. Cash rents increase from $34.63 per acre in 2003 to $41.36 per acre in 2010 for the Farmers Union proposal. Cash rents increase from $34.63 per acre in 2003 to $35.26 per acre in 2010 for the FAIR Act.

Economic Analysis of Alternative Farm Bill Proposals

Richard D. Taylor and Won W. Koo*

Introduction

In 1996, the U.S. Congress passed the Federal Agricultural Improvement and Reform Act (FAIR Act). The FAIR Act was based on a number of assumptions concerning world population and income growth, reduction in worldwide trade restrictions, increased production efficiency, and increased export competition. As history has shown, many of the assumptions have proven to be incorrect.

The FAIR Act was a departure from previous farm legislation. Payments were decoupled from production and the bill allowed planting flexibility for producers in response to market signals. The FAIR Act was designed to reduce farmer reliance on federal government support by slowly reducing government payments over the life of the farm bill. History has shown that the FAIR Act has not accomplished its purpose because of many factors outside of agriculture.

The debate over a new farm bill has begun with various farm organizations and political parties taking sides on whether the FAIR Act needs to be scraped or just modified. This study analyzes three such proposals: the U.S. House of Representatives proposal H.R. 2646, the American Farm Bureau proposal, and the National Farmers Union proposal. The continuation of the FAIR Act is also included as an another alternative. The H.R. 2646 and the American Farm Bureau proposals are modifications of the FAIR Act while the National Farmers Union proposal is a totally redesigned bill.

The objective of the study is to analyze the three alternative farm bill proposals and the continuation of the FAIR Act and estimate the impacts on North Dakota agriculture using the North Dakota Representative Farm Model for each proposal. Net farm income, debt-to-asset ratios, land values, and cash rents under the alternative farm bill proposals are estimated for large, medium, and small size North Dakota farms.

Brief Summary of the Alternative Farm Bill Proposals

The House Committee on Agriculture has passed H.R. 2646. It proposed a number of changes in U.S. farm legislation. The legislation provides the continuation of planting flexibility, fixed payments, and a commodity marketing loan program. H.R. 2646 includes a counter-cyclical feature that is tied to market prices but not to current production decisions. Oilseed marketing loan rates are reduced, but producers are eligible for fixed and counter-cyclical payments on oilseeds. Producers will be able to update their base acres and use it to calculate direct payments.

Table 1 shows the adjusted loan rates and fixed payment levels proposed by H.R. 2646. The loan rates for wheat and corn are unchanged while the loan rates for barley and soybeans are reduced $0.06 and $0.34, respectively. Loan rates for minor oilseeds are reduced $0.60 per cwt. Fixed payments are increased for wheat, corn, and barley, while soybeans and minor oilseeds

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become eligible for the payments. Wheat increases $0.07 per bushel, corn $0.04, and barley $0.05. The payment levels for soybeans and minor oilseeds are $0.42 per bushel and $0.74 per pound, respectively.

Table 1. Loan Rates and Fixed Payments for 2002, Baseline, and H.R. 2646

		Loan Rates		Fixed Payment	
Commodity		2002 Baseline	H.R. 2646	2002 Baseline	H.R. 2646
Wheat	$/bu	2.58	2.58	0.46	0.53
Corn	$/bu	1.89	1.89	0.26	0.30
Soybeans	$/bu	5.26	4.92	NA	0.42
Minor oilseeds	$/cwt	9.30	8.70	NA	0.74
Barley	$/bu	1.71	1.65	0.20	0.25

The increases in fixed payments amount to $1.2 billion per year nationwide for the life of the proposal. Counter-cyclical payments provide an average of $3.9 billion per year for producers and additional marketing loan revenue is $0.26 billion per year.

The American Farm Bureau proposal modifies the FAIR Act in a number of areas. Production Flexibility Contracts (PFC) would be continued with the inclusion of oilseeds. They propose to increase the baseline spending for PFC from $4.0 billion per year, by $500 million, to include oilseeds. Loan rates would be raised for all commodities to bring them in line with soybeans. Table 2 shows the 2001 loan rates and the re-aligned loan rates. The national loan rate for wheat would increase $0.30, from $2.58 to $2.88. Corn and barley loan rates would increase $0.12 and $0.52, respectively. The loan rate for oilseeds would remain unchanged. The increased spending due to higher loan rates is $2.3 billion per year. The American Farm Bureau proposal would include a counter-cyclical program to stabilize farm revenue from year to year. The payments would be based on each individual state's gross cash receipts for each crop, rather than national production. The payments would be given if the current year's gross revenue for any covered crop was lower than 94% of the previous 3-year average gross cash receipts. Nationwide, the cost of this counter-cyclical program would be $3 billion each year.

The American Farm Bureau proposal also includes a number of changes in the Loan Deficiency Payment (LDP) program. In the proposal, producers would be allowed to lock in LDPs any time after planting, and the final LDP dates would be extended to coincide with the U.S. Department of Agriculture (USDA) crop-marketing year. Producers would be eligible for LDPs regardless of whether the producer has a PFC. Under the FAIR Act, producers who acquire land that was not enrolled in the farm program by a previous owner were not eligible for LDPs on that production; however, an exception was made for 2000.

Table 2. 2001 Announced Loan Rates and American Farm Bureau Re-aligned Rates

Commodity	2001 Announced Rates	2001 Re-aligned Rates
	-----------dollars/bushel------------	
Corn	1.89	2.01
Wheat	2.58	2.88
Soybeans	5.26	5.26
Barley	1.62	2.14

The Farmers Union Plan is a targeted plan which utilizes varying loan rates based on the USDA's full cost of production estimates for program crops and a Farmer Owned Reserve (FOR). The FOR is targeted towards a Limited Renewable Energy Reserve and a Humanitarian Assistance Reserve.

For the first $100,000 of loan value, the loan rate is 85% of the full cost of production (Table 3). The next $150,000 of loan value is priced at 80% of the full cost of production and the next $250,000 of loan value is priced at 70% of the full cost of production. Loan value over $500,000 is priced at 60% of the full cost of production. The USDA's full cost of production is assumed to increase with the estimated rate of inflation. The FOR is expected to increase market prices early in the forecast period while the FOR is being established (Table 4). Prices are expected to return to base levels toward the end of the period.

The FAIR Act is assumed to be continued as it was written in 1996. According to the recent announcement by the Administration, additional funding for the farm bill would not be available and the FAIR Act could be a possible farm bill for 2003.

The spending on the continuation of the FAIR Act is based on the Food and Agricultural Policy Research Institute's (FAPRI) estimate of government spending for the years 2001-2010. Table 5 shows the projected level of government spending. Government spending will be $13.91 billion in 2001 under the FAIR Act with the additional funding made available by Congress. Payments will decrease to $9.59 billion in 2002, the last year of the 1996 FAIR Act. Because of the slow increase in commodity prices, LDPs will decrease throughout the forecast period. Accordingly, government spending on agriculture will decrease from $8.91 billion in 2003 to $6.22 billion in 2010.

Table 3. Farmers Union's Farm Bill Proposed Loan Rates for Each Sales Category

	S. Wht	D.Wht	Barley	Sunflowers	Corn	Soybeans	Canola
	------------$/bushel-----------			$/cwt	-----$/bushel----		$/cwt
First $100,000 Loan Value, 85% of Cost of Production							
2003	4.30	4.30	2.32	10.41	2.66	5.89	10.41
2004	4.33	4.33	2.34	10.49	2.68	5.93	10.49
2005	4.38	4.38	2.36	10.61	2.72	6.00	10.61
2006	4.44	4.44	2.40	10.76	2.75	6.09	10.76
2007	4.51	4.51	2.43	10.92	2.80	6.18	10.92
2008	4.58	4.58	2.47	11.10	2.84	6.28	11.10
2009	4.66	4.66	2.51	11.28	2.89	6.38	11.28
2010	4.74	4.74	2.56	11.48	2.94	6.50	11.48
Next $150,000 of Loan Value, 80% of Cost of Production							
2003	4.05	4.05	2.18	9.80	2.51	5.54	9.80
2004	4.08	4.08	2.20	9.87	2.53	5.58	9.87
2005	4.12	4.12	2.22	9.99	2.56	5.65	9.99
2006	4.18	4.18	2.25	10.13	2.59	5.73	10.13
2007	4.24	4.24	2.29	10.28	2.63	5.81	10.28
2008	4.31	4.31	2.33	10.45	2.67	5.91	10.45
2009	4.39	4.39	2.37	10.62	2.72	6.01	10.62
2010	4.46	4.46	2.41	10.81	2.77	6.11	10.81
Next $250,000 of Loan Value, 70% of Cost of Production							
2003	3.54	3.54	**1.93**	8.57	2.19	4.85	8.57
2004	3.57	3.57	**1.97**	8.64	2.21	4.89	8.64
2005	3.61	3.61	**2.02**	8.74	2.24	4.94	8.74
2006	3.66	3.66	**2.07**	8.86	2.27	5.01	8.86
2007	3.71	3.71	**2.10**	8.99	2.30	5.09	8.99
2008	3.77	3.77	**2.15**	9.14	2.34	5.17	9.14
2009	3.84	3.84	**2.20**	**9.42**	2.38	5.26	9.29
2010	3.91	3.91	**2.28**	**9.73**	2.42	5.35	9.46
Next $500,000 of Loan Value, 60% of Cost of Production							
2003	3.03	3.03	**1.93**	7.35	1.88	4.16	7.35
2004	3.06	3.06	**1.97**	7.40	1.89	**4.27**	7.40
2005	3.09	3.09	**2.02**	**7.79**	1.92	**4.42**	**7.53**
2006	**3.15**	**3.15**	**2.07**	**8.18**	1.94	**4.55**	**7.79**
2007	**3.24**	**3.24**	**2.10**	**8.63**	1.97	**4.71**	**8.13**
2008	**3.29**	**3.29**	**2.15**	**9.09**	2.01	**4.88**	**8.46**
2009	**3.36**	**3.36**	**2.20**	**9.42**	2.04	**4.98**	**8.67**
2010	**3.45**	**3.45**	**2.28**	**9.73**	2.07	**5.07**	**8.85**

Note: Bold values indicate baseline market price.

Table 4. North Dakota Forecasted Crop Prices and Prices Under the Farmers Union Price Scenario

	S.Wht	D.Wht	Barley	Sunflower	Corn	Soybeans	Canola
	-----------$/bushels-----------			$/cwt	--$/bushels--		$/cwt
Baseline Scenario							
2002	2.81	2.70	1.89	6.49	1.78	3.97	6.61
2003	2.93	2.87	1.93	6.86	1.82	4.09	6.85
2004	3.01	2.99	1.97	7.35	1.85	4.27	7.22
2005	3.07	3.08	2.02	7.79	1.91	4.42	7.53
2006	3.15	3.20	2.07	8.18	1.96	4.55	7.79
2007	3.24	3.33	2.10	8.63	2.02	4.71	8.13
2008	3.29	3.40	2.15	9.09	2.07	4.88	8.46
2009	3.36	3.50	2.20	9.42	2.12	4.98	8.67
2010	3.45	3.63	2.28	9.73	2.19	5.07	8.85
Farmers Union Price Scenario							
2002	2.81	2.70	1.89	6.49	1.78	3.97	6.61
2003	4.00	3.92	2.43	9.27	2.42	5.52	9.25
2004	3.79	3.77	2.28	9.43	2.23	5.48	9.26
2005	3.47	3.48	2.10	9.70	2.25	5.51	9.38
2006	3.33	3.38	1.97	9.38	1.84	5.22	8.94
2007	3.27	3.36	1.93	9.59	1.81	5.24	9.03
2008	3.29	3.40	2.15	9.09	2.07	4.88	8.46
2009	3.36	3.50	2.20	9.42	2.12	4.98	8.67
2010	3.45	3.63	2.28	9.73	2.19	5.07	8.85

Table 5. FAPRI's Projection of Government Spending on Agriculture for the Continuation of the FAIR Act, 2001-2010

Year	Government Spending
	billion $
2001*	13.91
2002*	9.59
2003	8.91
2004	8.37
2005	7.84
2006	7.35
2007	6.80
2008	6.38
2009	6.26
2010	6.22

*Spending under the 1996 FAIR Act.

The counter-cyclical feature of the H.R. 2646 and the Farm Bureau proposals is difficult to incorporate into the model. Trendline yields and FAPRI price forecasts do not allow either price or production shocks to occur. Therefore, after the first 3 years of the forecast period, counter-cyclical payments are no longer made to producers because the current gross return for each crop is nearly equal to the last 3-year average gross return.

Structure of the Representative Farm Model

The model consists of four components: net farm income, debt-to-asset ratio, land price, and cash rent. These components are calculated for three different size farms: small, medium, and large size farms. The small size is defined as the smallest 25% of the farms enrolled in the North Dakota Farm and Ranch Business Management Education Program. The large size farm is the largest 25% of the farms. For this representative farm model, North Dakota is divided into four regions: Red River Valley, North Central, South Central, and Western. However, this analysis focuses on a representative farm for each of the three size categories at the state level.

The commodity prices for crops are obtained from FAPRI and ND simulation models for average farm prices of the crops in the United States. The national average farm prices are converted to the prices received by North Dakota representative farms by regressing average farm price of each crop produced in North Dakota against the national average farm price of the same crop.

Assumptions used in this study are that net farm income from livestock operation and production of other crops, including potatoes, canola, and dry beans, remains constant during the period; all farm enterprises in size and operation remain constant in the analysis; the farm equipment stock remains constant; indicating that depreciation allowances are invested back into farm equipment, and inventory changes, accounts receivable, accounts payable, and prepaid expenses and supplies are constant from year to year.

Net farm income is calculated by subtracting total crop and livestock expenses from total farm income. Crop and livestock expenses consist of direct costs, including seed, fertilizer, fuel, repairs, feed, supplies, feeder livestock purchases, hired labor; and indirect costs that include machinery depreciation, overhead such as insurance and licenses, land taxes, and land rent or interest on real estate debt. Total farm income is the sum of cash receipts from crop and livestock enterprises, government payments, CRP payments, custom work, patronage dividends, insurance income, and miscellaneous income.

Inventory changes, accounts receivable, accounts payable, and prepaid expenses and supplies are assumed to be constant from year to year. Cash receipts are based on predicted cash prices and yields in North Dakota. Cash prices received by farmers are estimated from North Dakota price equations which were estimated on the basis of the historical relationships between North Dakota prices and U.S. export prices of the commodities.

The debt-to-asset ratio is calculated by dividing total outstanding farm debt by total farm assets. Total debt includes debt on land and buildings, intermediate debt, and short-term debt. Total assets includes the price of farmland times acres of farmland, the depreciated value of farm equipment, and supplies, livestock, and liquid assets.

Land prices for representative farms are estimated on the basis of the implicit discount rate the farms have previously used and the expected return on land. Therefore, the land prices are defined as the amount that farms can afford to pay for farmland. They are not prevailing market prices. Financial data from average representative farms for each region are used to calculate a dollar return to land. To do this, all production expenses for the crops, including depreciation, land taxes, a labor charge for unpaid family labor, net return from a livestock enterprise, and a management fee equivalent to that charged by bank trust departments for management of share-rented farms, are subtracted from gross farm income. To the remaining balance, interest on real estate debt is added back because the return to land is not affected by ownership of the land. This figure is used as the return allocated to cropland.

For the forecast years, the capitalization rate is applied to the estimated average income per acre allocated to cropland to determine cropland value for land utilized to produce wheat, corn, soybeans, barley, and sunflowers. The average income is an n-year weighted moving average of annual per acre income. The price of cropland can be defined as the amount farmers are willing to pay for the cropland to produce wheat, barley, corn, soybeans, and sunflowers.

Cash rent for cropland is calculated by multiplying a k-year moving average of estimated price of cropland by the long-run capitalization rate, plus taxes on land. The cash rent is defined as the amount farmers are willing to pay for the rented cropland to produce wheat, barley, corn, soybeans, and sunflowers.

Analysis of the Alternative Farm Bill Proposals

The four alternative farm bill proposals were analyzed utilizing the North Dakota Representative Farm Model which is operational at North Dakota State University. These farm bill proposals are House Bill 2646, the American Farm Bureau proposal, the National Farmers Union proposal, and the continuation of the FAIR Act. The model estimates net farm income, debt-to-asset ratios, land values, and cash rents for various size North Dakota farms. The impacts on North Dakota farms were estimated for each alternative proposal by incorporating changes in crop prices, loan rates, and changes in direct government payments into the model.

<u>Net Farm Income</u>

Table 6 shows the net farm income for large, medium, and small size representative farms under each alternative farm bill proposal. The net farm income under the H.R. 2646 and the Farm Bureau proposals are very similar to each other while that under the Farmers Union proposal differs from the other proposals. Net farm income for the large size farm in 2003, the first year of the new farm bill, is predicted to be $115 thousand for the H.R. 2646 proposal and $114 for the Farm Bureau proposal. Net farm income slowly declines to $99 thousand in 2008-2009 for the H.R. 2646 proposal and $94 thousand for the Farm Bureau proposal. The 8-year average net farm income, 2003-2010, is $108 thousand for the H.R. 2646 proposal and $104 thousand for the Farm Bureau proposal. Net farm income for the medium size farm in 2003 is predicted to be $64 thousand under the H.R. 2646 proposal and $66 thousand under the Farm Bureau proposal. Net farm income also declines to $58 thousand in 2008 for the H.R. 2646 proposal and $55 thousand in 2008 under the Farm Bureau proposal. The 8-year average net farm income is $62 thousand for the H.R. 2646 proposal and $61 thousand for the Farm Bureau proposal. Net farm income for the small size farm in 2003 is predicted to be $29 thousand and declines to $27 thousand under the H.R. 2646 proposal. Net farm income under the Farm Bureau proposal is predicted to be $30 thousand in 2003 and declines to $26 thousand in 2008-2009. The 8-year average net farm income is $28 thousand for both proposals.

Table 6. Net Farm Income for Various Size North Dakota Farms Under the Various Alternative Farm Bill Proposals

	Large	Medium	Small
	--------------------dollars--------------------		
H.R. 2646			
2002	83,739	48,536	23,951
2003	115,204	64,306	29,197
2004	116,329	65,344	29,559
2005	114,926	64,817	29,271
2006	112,180	63,645	29,055
2007	104,830	61,603	28,153
2008	99,600	58,206	27,319
2009	99,257	58,741	27,377
2010	101,229	59,713	27,927
8-yr. avg.	107,945	62,047	28,482
Farm Bureau			
2002	83,739	48,536	23,951
2003	114,384	66,160	29,971
2004	114,373	66,742	30,064
2005	112,694	64,811	29,110
2006	107,890	62,422	28,104
2007	99,173	59,464	26,786
2008	93,789	54,827	25,501
2009	93,852	55,583	25,666
2010	97,915	57,869	26,526
8-yr. avg.	104,259	60,985	27,716
Farmers Union			
2002	83,739	48,536	23,951
2003	101,401	67,591	33,002
2004	100,359	68,728	33,232
2005	101,365	70,556	33,657
2006	101,774	71,707	34,387
2007	101,310	71,653	34,350
2008	101,678	70,914	34,442
2009	100,965	70,488	34,292
2010	100,146	69,584	34,267
8-yr. avg.	101,125	70,153	33,954
FAIR Act			
2002	83,739	48,536	23,951
2003	83,448	48,352	24,228
2004	84,399	49,850	24,644
2005	87,937	51,523	24,797
2006	90,764	52,469	25,392
2007	89,741	52,771	25,819
2008	88,800	50,989	25,580
2009	88,724	51,546	25,723
2010	91,269	52,719	26,026
8-yr. avg.	88,135	51,277	25,276

Net farm income for the large size farm in 2003 is predicted to be $101 thousand under the Farmers Union proposal. Net farm income remains in the $100-102 thousand range throughout the forecast period. This is mainly because the Farmers Union proposal accounts for increases in production costs in calculating loan rates while the other proposals do not adjust loan rates based on increasing production costs. The Farmers Union proposal provides less income early in the forecast period for the large size farm than the other proposals but higher income during the last few years (Figure 1). Net farm income for the medium size farm in 2003 is predicted to be $68 thousand for the Farmers Union proposal. Net farm income remains in the $68-72 thousand range throughout the forecast period. The Farmers Union proposal provides similar income early in the forecast period for the medium size farm but higher income during the last few years (Figure 2). Net farm income for the small size farm in 2003 is predicted to be $33 thousand and remains in the $33-34 thousand range throughout the forecast period under the Farmers Union proposal. The Farmers Union proposal provides higher net farm income for the small size farm throughout the forecast period (Figure 3). The 8-year average net income is $101 thousand for the large size farm, $70 thousand for the medium size farm, and $34 thousand for the small size farm. The average net farm income for the large size farm under the Farmers Union proposal is less than the other proposals, while that for the medium and small size farms is higher.

Net farm income under the FAIR Act is smaller for all size farms than the other proposals. Net farm income in 2003 is predicted to be $83 thousand for the large size farms under the continuation of the FAIR Act, $48 thousand for the medium size farm, and $24 thousand for the small size farm. Net farm income is predicted to increase for the 2003-2010 period (Figures 1,2,3). Average net farm income is $88 thousand for the large size farm, $51 thousand for the medium size farm, and $25 thousand for the small size farm.

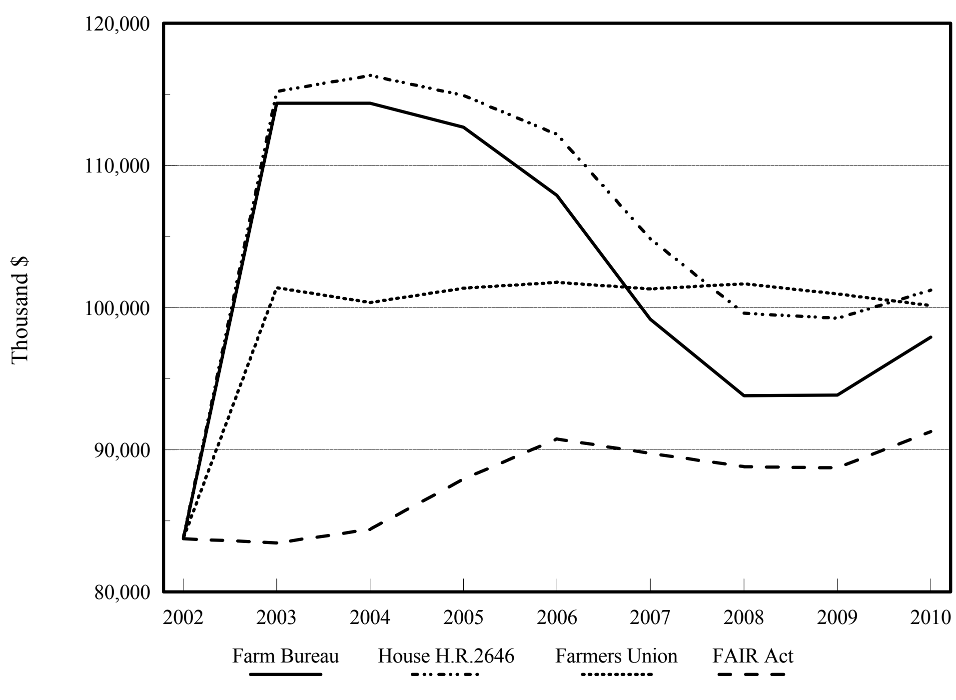

Figure 1. Net Farm Income Under Various Farm Bill Proposals for LargeSize Representative Farms

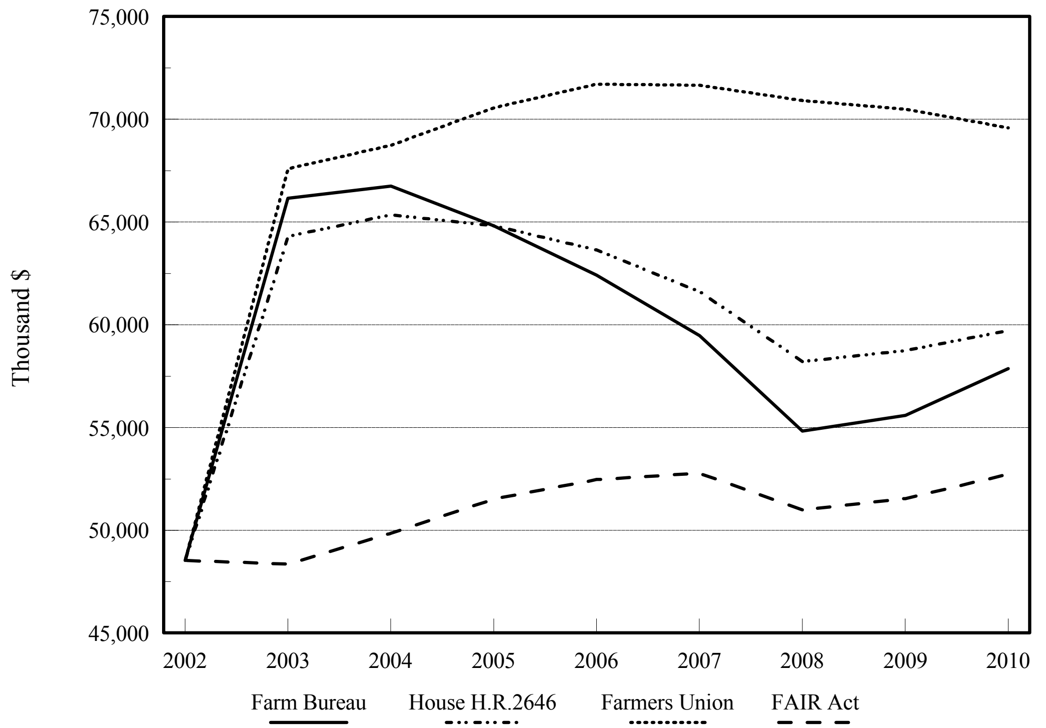

Figure 2. Net Farm Income Under Various Farm Bill Proposals for Medium Size Representative Farms

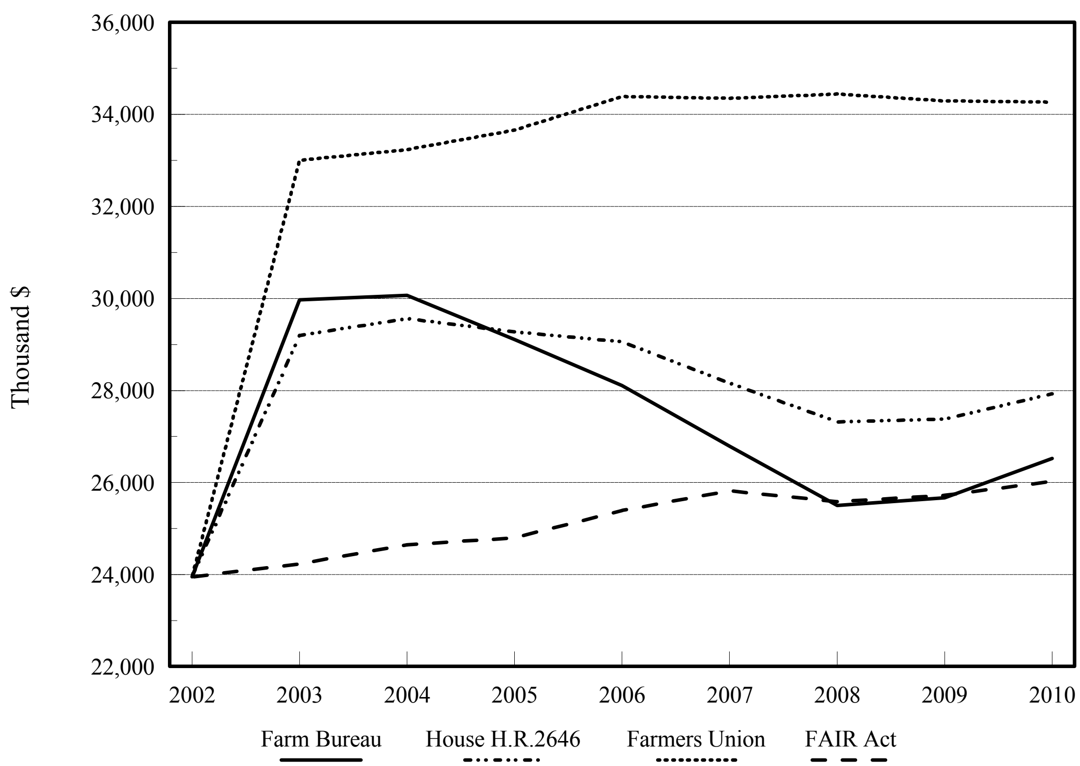

Figure 3. Net Farm Income Under Various Farm Bill Proposals for Small Size Representative Farms

Debt-to-asset Ratio

Table 7 shows the debt-to-asset ratios for large, medium, and small size representative farms for each alternative farm bill proposal. The H.R. 2646 and the Farm Bureau proposals are very similar in their debt-to-asset ratios. Debt-to-asset ratio for the large size farm, in 2003, is predicted to be 0.33 for both the H.R. 2646 and the Farm Bureau proposals and falls to 0.31 in 2008 for the H.R. 2646 proposal and remains almost level for the Farm Bureau proposal. Debt-to-asset ratio for the medium size farm is predicted to be 0.44 under both the H.R. 2646 and the Farm Bureau proposals for 2003 and is stable under both proposals. Debt-to-asset ratio for the small farm, in 2003, is predicted to be 0.56 for both the H.R. 2646 and the Farm Bureau proposals and slowly increases to 0.58 in 2009 for the H.R. 2646 proposal and 0.59 for the Farm Bureau proposal.

Debt-to-asset ratio for the large size farm is predicted to decrease from 0.34 in 2003 to 0.31 in 2009 under the Farmers Union proposal (Figure 4). Debt-to-asset ratio for the medium size farm is predicted to be 0.44 and decreases slightly to 0.43 (Figure 5). Debt-to-asset ratio for the small size farm in 2003 is predicted to be 0.57 for the Farmers Union proposal and falls to 0.55 in 2009 (Figure 6).

Debt-to-asset ratios are expected to be higher in the FAIR Act compared to the other three proposals. Debt-to-asset ratio for the large size farm in 2003 is predicted to be 0.36 under the FAIR Act and increases to 0.37 in 2005 (Figure 4). Debt-to-asset ratio for the medium size farm in 2003 is predicted to be 0.45 under the FAIR Act and increases to 0.47 in 2008 (Figure 5). Debt-to-asset ratio for the small size farm in 2003 is predicted to be 0.58 under the FAIR Act and increases to 0.60 in 2006 (Figure 6).

Land Values

Table 8 shows North Dakota land values under the various alternative farm bill proposals. The H.R. 2646 and the Farm Bureau proposals are almost identical because the return to land for the medium size farms is very similar. Land values increase from $456 per acre in 2003 for both plans to $523 per acre for the H.R.2646 proposal and $521 per acre for the Farm Bureau proposal. The 8-year average for both proposals is $491 per acre. The Farmers Union proposal increases land values more than the other two proposals because the return to land is higher under the Farmers Union proposal because of the targeting feature (Figure 7). The land value increases from $456 per acre in 2003 to $545 per acre in 2010. The 8-year average is $508 per acre. The FAIR Act increases land values less than under the other proposals because the return to land is lower under the FAIR Act (Figure 7). The land value increases from $456 per acre in 2003 to $477 per acre in 2010. The 8-year average is $466 per acre.

Table 7. North Dakota Debt-to-asset Ratio for Various Size North Dakota Farms Under the Various Alternative Farm Bill Proposals

	Large	Med	Small
H.R. 2646			
2002	0.36	0.45	0.58
2003	0.33	0.44	0.56
2004	0.33	0.44	0.56
2005	0.32	0.44	0.56
2006	0.32	0.44	0.57
2007	0.31	0.44	0.57
2008	0.31	0.44	0.58
2009	0.32	0.44	0.58
2010	0.32	0.44	0.58
Farm Bureau			
2002	0.36	0.45	0.58
2003	0.33	0.44	0.56
2004	0.33	0.44	0.56
2005	0.33	0.44	0.56
2006	0.33	0.44	0.57
2007	0.32	0.44	0.58
2008	0.33	0.44	0.59
2009	0.33	0.44	0.59
2010	0.33	0.44	0.58
Farmers Union			
2002	0.36	0.45	0.58
2003	0.34	0.44	0.57
2004	0.33	0.44	0.56
2005	0.33	0.44	0.56
2006	0.33	0.44	0.56
2007	0.32	0.44	0.56
2008	0.32	0.43	0.56
2009	0.31	0.43	0.55
2010	0.31	0.43	0.55
FAIR Act			
2002	0.36	0.45	0.58
2003	0.36	0.45	0.58
2004	0.36	0.46	0.59
2005	0.37	0.46	0.59
2006	0.37	0.46	0.60
2007	0.37	0.46	0.60
2008	0.37	0.47	0.60
2009	0.37	0.46	0.60
2010	0.37	0.46	0.60

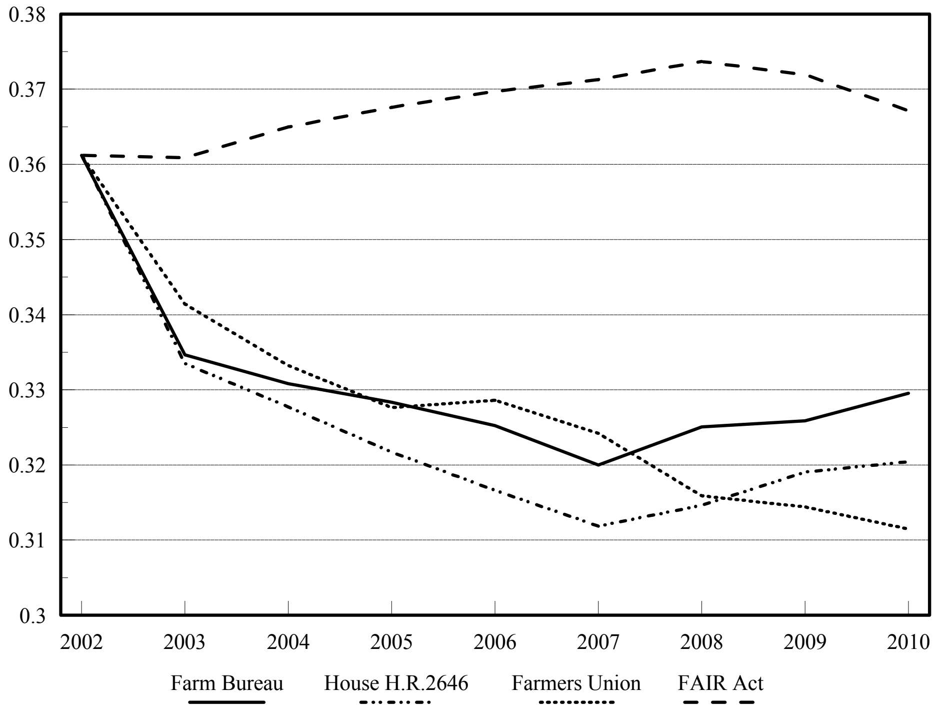

Figure 4. Debt-to-asset Ratio Under Various Farm Bill Proposals for Large Size Representative Farms

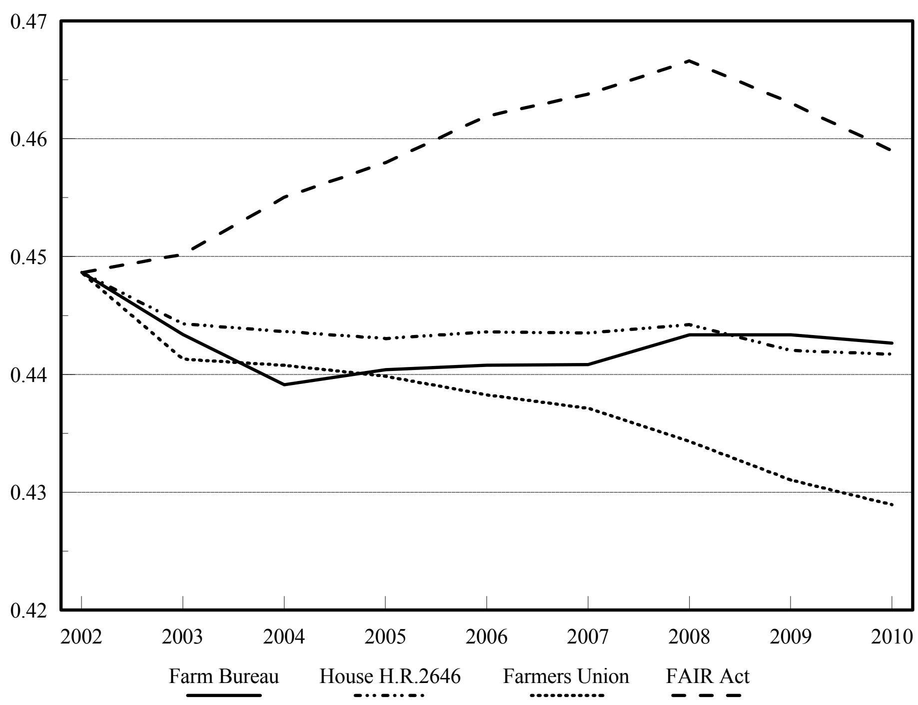

Figure 5. Debt-to-asset Ratio Under Various Farm Bill Proposals for Medium Size Representative Farms

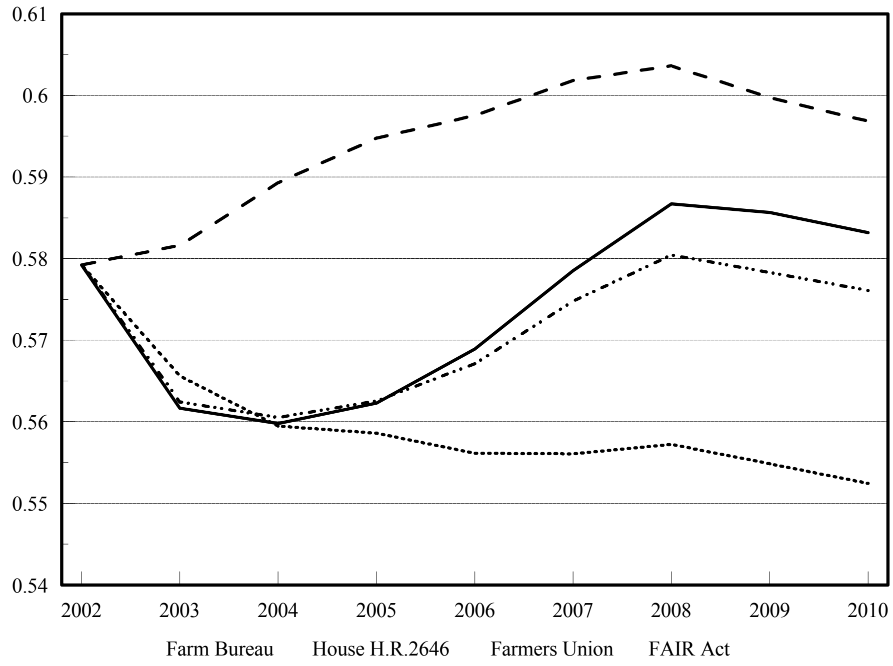

Figure 6. Debt-to-asset Ratio Under Various Farm Bill Proposals for Small Size Representative Farms

Table 8. North Dakota Land Values Under the Various Alternative Farm Bill Proposals

	H.R. 2646	Farm Bureau	Farmers Union	FAIR Act
	----------------------dollar/acre----------------------			
2002	461	461	461	461
2003	456	456	456	456
2004	463	463	472	459
2005	479	479	492	461
2006	487	488	509	464
2007	498	498	522	467
2008	507	506	531	470
2009	516	514	538	473
2010	523	521	545	477
8-year avg.	491	491	508	466

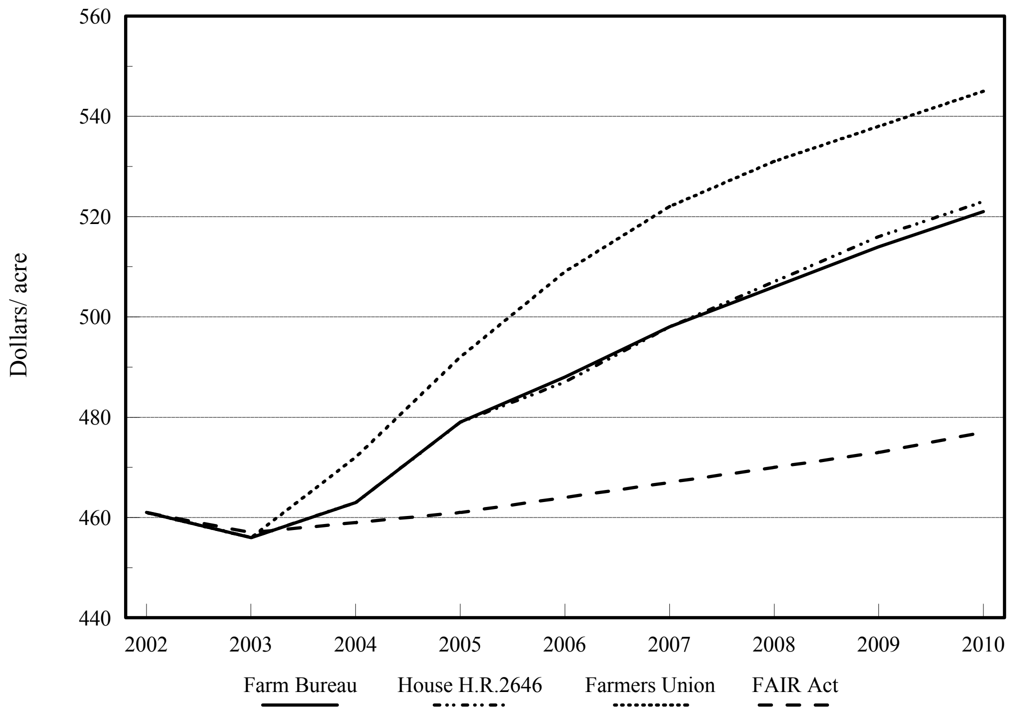

Figure 7. North Dakota Land Values Under Various Farm Bill Proposals

Cash Rents

Table 9 shows the cash rent which North Dakota farmers could pay under the various alternative farm bill proposals. The H.R. 2646 and the Farm Bureau proposals are almost identical because the return to land and land values for the medium size farms are very similar. Cash rents increase 16.5% under the H.R.2646 proposal and 16.1% under the Farm Bureau proposal. The Farmers Union proposal increases cash rents more than the other two because the return to land and land value is higher under the Farmers Union proposal because of the targeting feature (Figure 8). The land value increases about 20.5% for the 2003-2010 period under the Farmers Union proposal. The FAIR Act increases cash rents less than the other proposals because the return to land and land value is lower under the FAIR Act (Figure 8). The cash rents increase only 3.3% for the 2003-2010 period.

Table 9. North Dakota Cash Rents Under the Various Alternative Farm Bill Proposals

	H.R. 2646	Farm Bureau	Farmers Union	FAIR Act
	--------------------------dollar/acre-------------------------			
2002	34.13	34.13	34.13	34.13
2003	34.63	34.63	34.63	34.63
2004	34.95	34.96	35.56	33.97
2005	34.65	35.69	36.64	34.12
2006	35.80	35.86	37.32	34.34
2007	36.04	36.04	37.72	34.57
2008	37.17	37.04	38.84	34.80
2009	38.60	38.42	40.13	35.00
2010	39.75	39.62	41.36	35.26
Percent Change	16.5%	16.1%	21.2%	3.33%

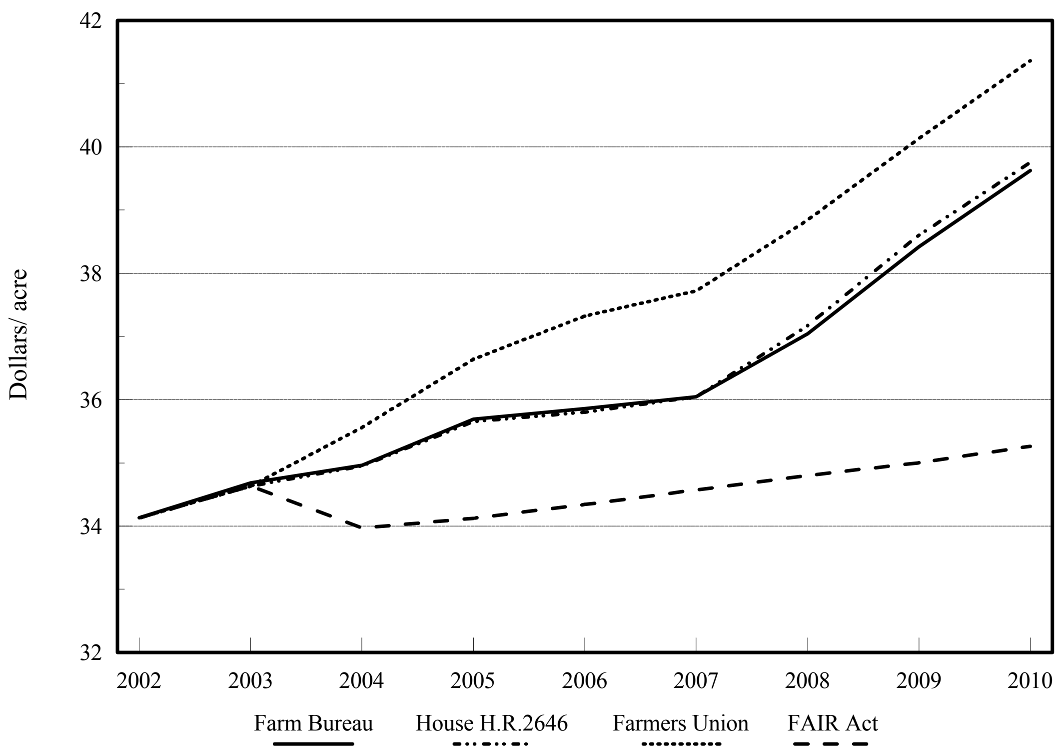

Figure 8. North Dakota Cash Rents Under Various Farm Bill Proposals

Summary

The FAIR Act was based on a number of assumptions, which as history has shown, have proven to be incorrect. The FAIR Act was a departure from previous farm legislation in that payments were decoupled from production and the bill allowed planting flexibility by producers in response to market signals. The FAIR Act was designed to reduce farmer reliance on federal government support by slowly reducing government payments over the life of the farm bill.

The debate over a new farm bill has begun with various farm organizations and political parties taking sides on whether the FAIR Act needs to be scraped or just modified. The H.R. 2646 and the American Farm Bureau proposals are modifications of the FAIR Act while the National Farmers Union proposal is a totally redesigned bill. The FAIR Act was included in this analysis because of the recent budget situation.

The H.R. 2646 and the Farm Bureau proposals are very similar in their results. They provide higher net farm income for the large size farm than the Farmers Union proposal does early in the forecast period, but the Farmers Union proposal provides higher net farm income the last three years of the forecast period. In addition, the Farmers Union proposal provides higher net farm income for the medium and small size farm than either the H.R. 2646 or the Farm Bureau proposals because of the targeting feature. The FAIR Act provides the lowest net farm income for all size farms.

Debt-to-asset ratios under the H.R. 2646 and the Farm Bureau proposals fall for large size farms, are stable for the medium size farms, and increase for the small size farm. Debt-to-asset ratios fall for all farms under the Farmers Union proposal while they increase under the FAIR Act.

Land values increase 4.6% under the FAIR Act, 14.7% under the H.R. 2646 and the Farm Bureau proposals, and 19.5% under the Farmers Union proposal. Cash rents increase 3.3% under the FAIR Act, 16.5% under the H.R. 2646 proposal, 16.1% under the Farm Bureau proposal, and 21.2% under the Farmers Union proposal.

All three farm bill proposals provide substantially high net farm income and lower debt-to-asset ratios than the continuation of the FAIR Act. The higher incomes are capitalized into land values and cash rents.

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