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Base Revenue Protection and Revenue Countercyclical Programs for Spring Wheat in North Dakota

Dwight G. Aakre, Ronald H. Haugen, and Andrew L. Swenson*

Abstract

The National Corn Growers Association Public Policy Team's Base Revenue Projection Program (BRP) and the Revenue Countercyclical Program (RCCP) were analyzed. The analysis was done for spring wheat using the BRP-RCCP calculator, as developed by the National Corn Growers Association. Three representative counties (Hettinger, Ward and Cavalier) were chosen in North Dakota. Historic and projected data were used to analyze 2002 to 2010 crop years. A comparison of the BRP-RCCP programs to the current farm program was done.

From 2002 to 2005, Ward County would have received nearly identical payments under the BRP-RCCP program and the current farm program. The Hettinger County farm would have received considerably more under the BRP-RCCP program - $76.87 per acre, compared with $38.99 under the existing farm program. This amounts to $9.22 per acre per year. For the Cavalier County farm, the advantage to the BRP-RCCP program was only $7.56 per acre for the four-year period.

Keywords: farm bill, wheat, countercyclical payments, revenue

Introduction

At the request of the North Dakota Corn Growers Association, government program revenue for North Dakota spring wheat was analyzed. The model and methodology used were developed by the National Corn Growers Association Public Policy Team. The alternative set of programs would replace the current set of farm programs in the 2007 farm bill with four changes: 1) maintenance of the present calculation for direct payments, 2) change the nonrecourse loan program to a recourse program, 3) create a new Base Revenue Protection (BRP) program and 4) modify the current countercyclical payment program into a Revenue Countercyclical Program (RCCP). The BRP-RCCP calculator, as developed by the National Corn Growers Association, was used to generate the results using North Dakota data. Historical 2002 to 2005 comparison was done comparing BRP-RCCP to past programs for representative counties for each crop. Projected 2006 to 2010 comparison also was done comparing the BRP-RCCP program relative to the current programs.

Spring wheat was analyzed for 2002 to 2005 historically and 2006 to 2010 projected. Three counties in North Dakota, one in the southwestern region of the state, one in the northwestern region of the state and one in the northeastern region of the state, were studied.. Each of these

* Aakre and Haugen are Farm Management Specialists and Swenson is Farm & Family Resource Management Specialist, Department of Agribusiness and Applied Economics, North Dakota State University, Fargo. Thanks are given to the North Dakota Corn Growers Association who sponsored this study and to the reviewers of this report: Dr. Cole Gustafson and Mr. Randy Coon, NDSU Department of Agribusiness and Applied Economics, and Ellen Crawford, NDSU Agriculture Communication. Thanks are also given to Sandy Osborne and Norma Ackerson for help in final preparation of the report.

wheat-growing regions represents the diverse climate of North Dakota. Hettinger County was chosen in the southwestern drier growing region. Yields are more variable, all dependent on rainfall. Hettinger County rotation is mainly spring wheat, with smaller acreages of other crops. Hettinger County ranks ninth in the state in spring wheat production, with 7,7500,00 bushels produced in 2005. Ward County was chosen as a northwestern drier region. It typically has a spring wheat rotation with flax or sunflowers. It ranks third in the state in spring wheat production, with 9,290,000 bushels produced in 2005. Cavalier County was chosen in the northeastern wetter wheat-growing region. It has the potential for scab and other disease. Cavalier County ranks fourth in the state in spring wheat production, with 9,210,000 bushels produced in 2005. A typical crop rotation for Cavalier County is wheat and canola.

Calculating the Base Revenue Protection Payment (BRP)

Tables 1A, 1B and 1C include historical data for farms in Hettinger, Ward and Cavalier counties, respectively, for 1997 through 2005. Data included in these tables are farm yields, National Agricultural Statistics Service (NASS) prices, Economic Research Service (ERS) variable costs and BRP net revenue. Farm yields are the county average yield per planted acre. NASS prices are the annual average national wheat price. ERS variable costs are the variable costs reported by the ERS for the Northern Plains region. The BRP values are calculated for each farm by multiplying the actual yield by the NASS price and subtracting the ERS variable costs.

NOTE: Under the BRP program, the farm yield would be the yield for each individual farm, not the county average as used here. Furthermore, it would be the yield averaged over the entire farm operation, not optional units, as is available with multiperil crop insurance.

Table 1A. Wheat Data For Hettinger County Farm, 1997-2005

Year	Farm Yield	NASS Price	ERS Var Costs	BRP Net Revenue
	(bu/ac)	($/bu)	($/acre)	($/acre)
1997	27.3	3.38	57.92	34.35
1998	33.7	2.65	50.77	38.54
1999	26.5	2.48	48.20	17.52
2000	39.0	2.62	51.77	50.41
2001	38.0	2.78	56.71	48.93
2002	14.2	3.56	49.32	1.23
2003	30.2	3.40	60.23	42.45
2004	29.5	3.40	65.90	34.40
2005	34.0	3.42	72.25	44.03

Table 1B. Wheat Data For Ward County Farm, 1997-2005

Year	Farm Yield	NASS Price	ERS Var Costs	BRP Net Revenue
	(bu/ac)	($/bu)	($/acre)	($/acre)
1997	21.0	3.38	57.92	13.06
1998	32.4	2.65	50.77	35.09
1999	23.4	2.48	48.20	9.83
2000	30.1	2.62	51.77	27.09
2001	26.9	2.78	56.71	18.07
2002	26.1	3.56	49.32	43.60
2003	32.3	3.40	60.23	49.59
2004	40.3	3.40	65.90	71.12
2005	38.7	3.42	72.25	60.10

Table 1C. Wheat Data For Cavalier County Farm, 1997-2005

Year	Farm Yield	NASS Price	ERS Var Costs	BRP Net Revenue
	(bu/ac)	($/bu)	($/acre)	($/acre)
1997	23.4	3.38	57.92	21.17
1998	34.4	2.65	50.77	40.39
1999	32.1	2.48	48.20	31.41
2000	35.1	2.62	51.77	40.19
2001	27.9	2.78	56.71	20.85
2002	32.1	3.56	49.32	64.96
2003	46.7	3.40	60.23	98.55
2004	43.3	3.40	65.90	81.32
2005	29.8	3.42	72.25	29.67

This analysis utilized county average yields, rather than individual farm yields, to better reflect the impact to wheat producers as a whole. Much of the variability of yields by unit has to do with optional units within whole-farm units. As this program is proposed, a unit would be no smaller than a whole farm.

The historical data from tables 1A, 1B and 1C are used to calculate the BRP guarantee and the BRP payment found in tables 2A, 2B and 2C. The Olympic average figures are derived from the BRP net revenues from the previous five years. For example, in table 2A, the Olympic average for 2002 ($40.61) is calculated from the BRP net revenue figures from 1997 though 2001 from table 1A. The high value from 2000 ($50.41) and the low value from 1999 ($17.52) are dropped and the remaining three values are averaged. The BRP guarantee is calculated by multiplying the Olympic average by 70 percent, yielding $28.42 for 2002.

Table 2A. Hettinger County
Loss Calculations for BRP through 2005 and Guarantees through 2006

Year	Olympic Average	BRP Guarantee	BRP Net Revenue	Per Acre Payment
	($/acre)	($/acre)	($/acre)	($/acre)
2002	40.61	28.42	1.23	27.19
2003	35.00	24.50	42.45	0.00
2004	36.30	25.41	34.40	0.00
2006	41.93	29.35	44.03	0.00
2006	40.29	28.21		

Table 2B. Ward County
Loss Calculations for BRP through 2005 and Guarantees through 2006

Year	Olympic Average	BRP Guarantee	BRP Net Revenue	Per Acre Payment
	($/acre)	($/acre)	($/acre)	($/acre)
2002	19.41	13.59	43.60	0.00
2003	26.75	18.73	49.59	0.00
2004	29.59	20.71	71.12	0.00
2005	40.09	28.06	60.10	0.00
2006	51.10	35.77		

Table 2C. Cavalier County
Loss Calculations for BRP through 2005 and Guarantees through 2006

Year	Olympic Average	BRP Guarantee	BRP Net Revenue	Per Acre Payment
	($/acre)	($/acre)	($/acre)	($/acre)
2002	30.92	21.65	64.96	0.00
2003	37.33	26.13	98.55	0.00
2004	45.52	31.86	81.32	0.00
2005	62.16	43.51	29.67	13.84
2006	58.65	41.05		

To determine if a BRP payment would have been paid in 2002 on this farm, the BRP net revenue is subtracted from the BRP guarantee. If this calculation is zero or a negative value, no payment is made. For the years 2002 through 2005, no BRP payment would have been made to the Ward County farm. The farm in Cavalier County would have received a BRP payment in 2005. The Cavalier County farm had net revenue of $29.67 per acre and a BRP guarantee of $43.51, resulting in a payment of $13.84 per acre. The Hettinger County farm would have received a BRP payment in 2002. This farm had a guarantee of $28.42 and actual revenue of $1.23 per acre. As a result, the BRP payment would have been $27.19 per acre.

The BRP payment per acre may exceed the BRP guarantee if net revenue in any year is negative. This is possible because the BRP payment takes into account negative net revenue values and adds this value to the guarantee.

The Olympic average needed to calculate the BRP guarantee is similar to actual production history (APH) with multiperil crop insurance in that this value increases and decreases based on actual farm yields. A significant difference is that APH is an average of only yields, while BRP is an average of net revenue. BRP takes into account yields, the national average market price and regional variable costs of production. Consecutive years of high or low net revenues can cause an increase or decrease in the BRP guarantee or safety net. For the Cavalier and Ward County farms, the BRP guarantee increased significantly from 2002 to 2005. The BRP guarantee for the Hettinger County farm remained stable through this five-year period.

Tables 3A, 3B and 3C include the data needed to calculate the BRP net revenue for years 2004 through 2008 and the BRP guarantee for 2009. The National Corn Growers Association proposes including existing farm program payments from marketing loan benefits and the countercyclical payment program in the transition to the BRP-RCCP program. To illustrate this, the BRP net

revenue for 2004 and 2005 includes both payments. The average loan deficiency payment rate (LDP) was obtained from the Farm Service Agency (FSA) and applied to total production on each farm for 2004 and 2005. Countercyclical payments were made for wheat in both 2004 and 2005. The countercyclical payment rate and the average countercyclical payment yield for each county were obtained from the FSA.

Table 3A. Hettinger County
Calculation of BRP Net Revenue from 2004 - 2008 and 2009 BRP Guarantee

Year	Farm Yield (bu/acre)	NASS Price ($/acre)	ERS Var Costs ($/acre)	LDP ($/acre)	CCP ($/acre)	BRP Net Revenue ($/acre)
2004	29.5	3.40	65.90	4.72	0.00	39.12
2005	34.0	3.42	72.25	6.46	0.00	50.49
2006	33.6	4.27	79.12			64.35
2007	34.0	4.13	80.04			60.38
2008	34.5	4.11	78.37			63.43
2009 BRP Guarantee			40.67			

Table 3B. Ward County
Calculation of BRP Net Revenue from 2004 - 2008 and 2009 BRP Guarantee

Year	Farm Yield (bu/acre)	NASS Price ($/acre)	ERS Var. Costs ($/acre)	LDP ($/acre)	CCP ($/acre)	BRP Net Revenue ($/acre)
2004	40.3	3.40	65.90	7.25	0.00	78.37
2005	38.7	3.42	72.25	7.74	0.00	67.84
2006	32.6	4.27	79.12			60.08
2007	32.8	4.13	80.04			55.42
2008	33.0	4.11	78.37			57.26
2009 BRP Guarantee			43.21			

Table 3C. Cavalier County
Calculation of BRP Net Revenue from 2004 - 2008 and 2009 BRP Guarantee

Year	Farm Yield (bu/acre)	NASS Price ($/acre)	ERS Var. Costs ($/acre)	LDP ($/acre)	CCP ($/acre)	BRP Net Revenue ($/acre)
2004	43.3	3.40	65.90	10.39	0.00	91.71
2005	29.8	3.42	72.25	6.85	0.00	36.52
2006	33.2	4.27	79.12			62.64
2007	33.2	4.13	80.04			57.08
2008	33.3	4.11	78.37			58.49
2009 BRP Guarantee			41.58			

The data for years 2006 through 2008 were estimated using the BRP-RCCP calculator. The farm yields equal the county trend yields. The prices used for 2006 through 2008 are from the Food and Agricultural Policy Institute (FAPRI) projections released in November 2006. Due to above-average yields during 2004 and 2005 in Ward and Cavalier counties, the BRP net revenue declines from 2006 through 2008 when trend yields are assumed. Low yield for 2004 in

Hettinger County contributed to low net revenue that year, but in subsequent years, net revenue was stable at a higher level. The BRP guarantee for 2009 was calculated from the actual net revenue for 2004 and 2005 and the net revenue projections for 2006 through 2008.

Revenue Countercyclical Program (RCCP)

Revenue Countercyclical Program (RCCP) payments are intended to replace countercyclical payments received with the 2002 farm program. These countercyclical payments are triggered by a low national average price only. No recognition of yield was used in calculating these payments. The RCCP payments are based on a shortfall of total revenue calculated by multiplying yield times price. RCCP payments are not impacted by the yield or price an individual farmer receives. Rather, these payments are triggered when the county revenue per acre for wheat is below the RCCP trigger revenue. The payment is determined by subtracting the product of the county average yield and the NASS price from the product of the county trend yield and the effective target price. The effective target price is the current target price minus the direct payment rate. The RCCP payment is capped at 30 percent of the trigger revenue, reflecting the 70 percent coverage level provided by the BRP program.

If an RCCP payment is triggered in a county, all wheat producers in that county will receive the same payment per acre multiplied by the planted acres on each farm. This is similar to the multiperil group risk insurance programs.

Tables 4A, 4B and 4C detail the per-acre RCCP trigger revenues and payments for farms in Hettinger, Ward and Cavalier counties for 2002 through 2010, respectively. The county trend yields were obtained from the BRP calculator. The actual yields used for 2002 through 2005 are the yield per planted acre reported by NASS. For 2006 through 2010, the yields used for actual yields are the county trend yields. Actual marketing year average prices are used for 2002 through 2005. Prices for 2006 through 2010 were obtained from the November projections from FAPRI. An RCCP payment would have been triggered in 2002, 2003 and 2004 in Hettinger County, Ward County in 2002 only and in 2005 only for Cavalier County. The payment for 2002 for Hettinger County would have been capped at the maximum level, which is 30 percent of the trigger level.

Table 4A. RCCP Trigger Revenues and Payments from 2002 to 2005, Hettinger County

Year	Trend Yield	Trigger Revenue	Actual Yield*	NASS Price	Actual Revenue	RCCP Payment	Maximum Payment
	(bu/acre)	($/acre)	(bu/acre)	($/bu)	($/acre)	($/acre)	($/acre)
2002	31.7	107.78	14.2	3.56	50.55	32.33	32.33
2003	32.2	109.48	30.2	3.40	102.68	6.80	32.84
2004	32.6	110.84	29.5	3.40	100.30	10.54	33.25
2005	33.1	112.54	34.0	3.42	116.28	0.00	33.76
2006	33.6	114.24	33.6	4.27	143.47	0.00	34.27
2007	34.0	115.60	34.0	4.13	140.42	0.00	34.68
2008	34.5	117.30	34.5	4.11	141.80	0.00	35.19
2009	35.0	119.00	35.0	4.18	146.30	0.00	35.70
2010	35.4	120.36	35.4	4.22	149.39	0.00	36.11

* Actual yields are used for 2002 -2005 and trend yields are used for 2006 -2010.

Table 4B. RCCP Trigger Revenues and Payments from 2002 to 2005, Ward County

Year	Trend Yield	Trigger Revenue	Actual Yield*	NASS Price	Actual Revenue	RCCP Payment	Maximum Payment
	(bu/acre)	($/acre)	(bu/acre)	($/bu)	($/acre)	($/acre)	($/acre)
2002	31.7	107.78	26.1	3.56	92.92	14.86	32.33
2003	31.9	108.46	32.3	3.40	109.82	0.00	32.54
2004	32.1	109.14	40.3	3.40	137.02	0.00	32.74
2005	32.4	110.16	38.7	3.42	132.35	0.00	33.05
2006	32.6	110.84	32.6	4.27	139.20	0.00	33.25
2007	32.8	111.52	32.8	4.13	135.46	0.00	33.46
2008	33.0	112.20	33.0	4.11	135.63	0.00	33.66
2009	33.2	112.88	33.2	4.18	138.78	0.00	33.86
2010	33.4	113.56	33.4	4.22	140.95	0.00	34.07

* Actual yields are used for 2002 -2005 and trend yields are used for 2006 -2010.

Table 4C. RCCP Trigger Revenues and Payments from 2002 to 2005, Cavalier County

Year	Trend Yield	Trigger Revenue	Actual Yield*	NASS Price	Actual Revenue	RCCP Payment	Maximum Payment
	(bu/acre)	($/acre)	(bu/acre)	($/bu)	($/acre)	($/acre)	($/acre)
2002	33.1	112.54	32.1	3.56	114.28	0.00	33.76
2003	33.1	112.54	46.7	3.40	158.78	0.00	33.76
2004	33.1	112.54	43.3	3.40	147.22	0.00	33.76
2005	33.2	112.88	29.8	3.42	101.92	10.96	33.86
2006	33.2	112.88	33.2	4.27	141.76	0.00	33.86
2007	33.2	112.88	33.2	4.13	137.12	0.00	33.86
2008	33.3	113.22	33.3	4.11	136.86	0.00	33.97
2009	33.3	113.22	33.3	4.18	139.19	0.00	33.97
2010	33.3	113.22	33.3	4.22	140.53	0.00	33.97

* Actual yields are used for 2002 -2005 and trend yields are used for 2006 -2010.

Representative Farms

Table 5 summarizes the CCP program payment yields for each county, as well as the LDP rates, actual yields and net crop insurance payments for the years 2002 through 2005. Crop insurance payments were based on APH policies at the 70 percent coverage level. The county average yield in 2002 for Hettinger County would have triggered an insurance indemnity payment.

Table 5. Representative Farms Data

	Year	Hettinger County	Ward County	Cavalier County
		(bushels per acre)		
CCP base		31	29	35
LDP rate			($ per bushel)	
	2002	0.00	0.00	0.00
	2003	0.00	0.02	0.00
	2004	0.16	0.18	0.24
	2005	0.19	0.20	0.23
Farm Yield		(bushels per acre)		
	2002	14.2	26.1	32.1
	2003	30.2	32.3	46.7
	2004	29.5	40.3	43.3
	2005	34.0	38.7	29.8
Net Crop Insurance Payments			($ per acre)	
	2002	27.81	0.00	0.00
	2003	0.00	0.00	0.00
	2004	0.00	0.00	0.00
	2005	0.00	0.00	0.00

Additional data for representative farms are included in Table 6. Farm yields for 1997 to 2001 are shown here. Variable costs from ERS and market prices from NASS are included for 1997 to 2005. Trend yields for 2001 to 2005 are included in this table.

Table 6. Additional Data for Representative Farms

	Year	Hettinger County	Ward County	Cavalier County
Farm Yield		(bushels per acre)		
	1997	27.3	21.0	23.4
	1998	33.7	32.4	34.4
	1999	26.5	23.4	32.1
	2000	39.0	30.1	35.1
	2001	38.0	26.9	27.9
Variable Costs		($ per acre)		
	1997	57.92	57.92	57.92
	1998	50.77	50.77	50.77
	1999	48.20	48.20	48.20
	2000	51.77	51.77	51.77
	2001	56.71	56.71	56.71
	2002	49.32	49.32	49.32
	2003	60.23	60.23	60.23
	2004	65.90	65.90	65.90
	2005	72.25	72.25	72.25
Market Price		($ per bushel)		
	1997	3.38	3.38	3.38
	1998	2.65	2.65	2.65
	1999	2.48	2.48	2.48
	2000	2.62	2.62	2.62
	2001	2.78	2.78	2.78
	2002	3.56	3.56	3.56
	2003	3.40	3.40	3.40
	2004	3.40	3.40	3.40
	2005	3.42	3.42	3.42
Trend Yield		(bushels per acre)		
	2002	31.7	31.7	33.1
	2003	32.2	31.9	33.1
	2004	32.6	32.1	33.1
	2005	33.1	32.4	33.2

Table 7 summarizes the BRP revenues, BRP guarantees and BRP payments for each farm. BRP revenue is shown from 1997 to 2005. BRP guarantees are shown for 2002 to 2006. BRP payments for 2002 to 2005 are shown. The only BRP payments that would have been made are for Hettinger County in 2002 and Cavalier County for 2005. The growing season during 2002 was very dry in southwestern North Dakota, causing significantly reduced yields for Hettinger County. A late, wet spring occurred in northeastern North Dakota, causing considerable prevented planted acres in Cavalier County.

Table 7.
Calculated BRP Revenues, Guarantees and Payments for Example Farms

	Year	Hettinger County	Ward County	Cavalier County
BRP Revenue		($ per acre)		
	1997	34.35	13.06	21.17
	1998	38.54	35.09	40.39
	1999	17.52	9.83	31.41
	2000	50.41	27.09	40.19
	2001	48.93	18.07	20.85
	2002	1.23	43.60	64.96
	2003	42.45	49.59	98.55
	2004	34.40	71.12	81.32
	2005	44.03	60.10	29.67
BRP Guanantee (70% of 5-Year Olympic Average of past BRP Revenues)				
	2002	28.42	13.59	21.65
	2003	24.50	18.73	26.13
	2004	25.41	20.71	31.86
	2005	29.35	28.06	43.51
	2006	28.21	35.77	41.05
BRP Payment (BRP Guarantee minus BRP Revenue)				
	2002	27.19	0.00	0.00
	2003	0.00	0.00	0.00
	2004	0.00	0.00	0.00
	2005	0.00	0.00	13.84

A summary of RCCP trigger revenues, actual RCCP revenues and RCCP payments are included in Table 8. All values are included for 2002 to 2005. RCCP payments would have been made in Hettinger and Ward counties in 2002 and in Hettinger County in 2003 and 2004. In 2005, only Cavalier County would have received an RCCP payment. The calculated payment for Hettinger County for 2002 was above the maximum payment and therefore reduced to the maximum amount.

Table 8.
RCCP Trigger Revenue, Actual County Revenue, and RCCP Payments

	Year	Hettinger County	Ward County	Cavalier County
RCCP Trigger Revenue		($ per acre)		
	2002	107.78	107.78	112.54
	2003	109.48	108.46	112.54
	2004	110.84	109.14	112.54
	2005	112.54	110.16	112.88
RCCP Actual Revenue				
	2002	50.55	92.92	114.28
	2003	102.68	109.82	158.78
	2004	100.30	137.02	147.22
	2005	116.28	132.35	101.92
RCCP Payment (RCCP trigger revenue minus RCCP actual revenue)				
	2002	**32.33**	14.86	0.00
	2003	6.80	0.00	0.00
	2004	10.54	0.00	0.00
	2005	0.00	0.00	10.96

Numbers in bold indicate maximum RCCP payment

Program Comparisons

Table 9 summarizes the LDP and CCP payments that would be earned under the current farm program for 2002 to 2005. LDP payments were available in 2003 in Ward County and during 2004 and 2005 in all counties. CCP payments were not made anytime during this four-year period.

Table 9.
LDP and CCP Payments for Example Farms

	Year	Hettinger County	Ward County	Cavalier County
LDP Payment			($ per acre)	
	2002	0.00	0.00	0.00
	2003	0.00	0.65	0.00
	2004	4.72	7.25	10.39
	2005	6.46	7.74	6.85
CCP Payment				
	2002	0.00	0.00	0.00
	2003	0.00	0.00	0.00
	2004	0.00	0.00	0.00
	2005	0.00	0.00	0.00

Table 10 summarizes the payments that would have been earned from 2002 to 2005 under the current farm program and under the BRP-RCCP program. The current program includes income from LDP and CCP payments, as well as crop insurance indemnity payments. The proposed

program includes BRP payments based on individual farm yields and RCCP payments based on county yields.

Table 10.
Payment Comparison by Year and Total for Example Farms

	Year	Hettinger County	Ward County	Cavalier County
LDP + CCP + CI		($ per acre)		
	2002	27.81	0.00	0.00
	2003	0.00	0.65	0.00
	2004	4.72	7.25	10.39
	2005	6.46	7.74	6.85
Total		38.99	15.64	17.25
RCCP + BRP				
	2002	59.53	14.86	0.00
	2003	6.80	0.00	0.00
	2004	10.54	0.00	0.00
	2005	0.00	0.00	24.81
Total		76.87	14.86	24.81

Ward County would have received nearly identical payments under the BRP-RCCP program and the current farm program. The Hettinger County farm would have received considerably more under the BRP-RCCP program - $76.87 per acre, compared with $38.99 per acre under the existing farm program. This amounts to $9.22 per acre per year. For Cavalier County, the advantage to the BRP-RCCP program was only $7.56 per acre for the four-year period.

Limitations

The BRP-RCCP programs have possible limitations. First, the ERS cost of production value is a regional number and may not be reflective of North Dakota. The program calculation depends on the accuracy of these values. Table 11 shows a comparison of ERS values to North Dakota Farm Business Management Records data. North Dakota costs are higher in all years from 2002 to 2005 with $13.47 greater costs in 2005. Secondly, the North Dakota Agricultural Statistics Service prices also are very critical to the program calculations. The national average all-wheat price differs considerably from the state average price for North Dakota. The North Dakota hard red spring wheat price during the last 10 years has averaged 5 percent above the national average all-wheat price. This would indicate a slightly higher safety net for North Dakota producers of hard red spring wheat. The third limitation is that, with the volatile climate and yield variability in North Dakota, two low yield years in a row would dramatically lower the BRP coverage guarantee. This is illustrated in tables 12A, 12B and 12C. The fourth limitation is the issue of whether the BRP-RCCP program will replace the crop insurance program or enhance it. If crop insurance is retained, this would be a duplication of coverage. Would producers have double coverage or be able to buy up coverage only over the BRP-RCCP protection? Finally, does the current relatively high price of spring wheat affect the results. There is an issue of whether volatile prices would make this program an adequate safety net.

Table 11.
Cost Comparison by Year to ND
Farm Business Management Records

Year	NDFBM Records	ERS Var Costs	Difference
	($/acre)	($/acre)	($/acre)
2002	58.42	49.32	9.10
2003	66.44	60.23	6.21
2004	74.04	65.90	8.14
2005	85.72	72.25	13.47

Table 12A. Hettinger County
Calculation of BRP Net Revenue, BRP Guarantee, BRP Payment, 2004 - 2010

Year	Farm Yield	NASS Price	ERS Var Costs	LDP	CCP	BRP Net Revenue	BRP Guarantee	BRP Payment
	(bu/acre)	($/acre)	($/acre)	($/acre)	($/acre)	($/acre)	($/acre)	($/acre)
1999	26.5	2.48	48.20			17.52		
2000	39.0	2.62	51.77			50.41		
2001	38.0	2.78	56.71			48.93		
2002	14.2	3.56	49.32			1.23		
2003	30.2	3.40	60.23			42.45		
2004	29.5	3.40	65.90	4.72	0.00	39.12	25.41	0.00
2005	33.1	3.42	72.25	6.46	0.00	47.41	30.45	0.00
2006	33.6	4.27	79.12			64.35	30.10	0.00
2007	**23.8**	4.13	80.04			18.25	30.10	11.84
2008	**24.2**	4.11	78.37			21.09	30.10	9.00
2009	35.0	4.18	78.79			67.51	25.11	0.00
2010	35.4	4.22	79.52			69.87	31.00	0.00

Bold values in 2007 and 2008 are 70% of expected farm yield

Table 12B. Ward County
Calculation of BRP Net Revenue, BRP Guarantee, BRP Payment, 2004 - 2010

Year	Farm Yield	NASS Price	ERS Var Costs	LDP	CCP	BRP Net Revenue	BRP Guarantee	BRP Payment
	(bu/acre)	($/acre)	($/acre)	($/acre)	($/acre)	($/acre)	($/acre)	($/acre)
1999	23.4	2.48	48.20			9.83		
2000	30.1	2.62	51.77			27.09		
2001	26.9	2.78	56.71			18.07		
2002	26.1	3.56	49.32			43.60		
2003	32.3	3.40	60.23			49.59		
2004	40.3	3.40	65.90	7.25	0.00	78.37	20.71	0.00
2005	38.7	3.42	72.25	7.74	0.00	67.84	28.06	0.00
2006	32.6	4.27	79.12			60.08	37.57	0.00
2007	**23.0**	4.13	80.04			14.95	41.42	26.47
2008	**23.1**	4.11	78.37			16.57	41.42	24.85
2009	33.2	4.18	78.79			59.99	33.72	0.00
2010	33.4	4.22	79.52			61.43	31.88	0.00

Bold values in 2007 and 2008 are 70% of expected farm yield

Table 12C. Cavalier County
Calculation of BRP Net Revenue, BRP Guarantee and BRP Payment, 2004 - 2010

Year	Farm Yield	NASS Price	ERS Var Costs	LDP	CCP	BRP Net Revenue	BRP Guarantee	BRP Payment
	(bu/acre)	($/acre)	($/acre)	($/acre)	($/acre)	($/acre)	($/acre)	($/acre)
1999	32.1	2.48	48.20			31.41		
2000	35.1	2.62	51.77			40.19		
2001	27.9	2.78	56.71			20.85		
2002	32.1	3.56	49.32			64.96		
2003	46.7	3.40	60.23			98.55		
2004	43.3	3.40	65.90	10.39	0.00	91.71	31.86	0.00
2005	29.8	3.42	72.25	6.85	0.00	36.52	45.93	9.42
2006	33.2	4.27	79.12			62.64	45.08	0.00
2007	**23.2**	4.13	80.04			15.78	51.17	35.40
2008	**23.3**	4.11	78.37			17.39	44.54	27.14
2009	33.3	4.18	78.79			60.40	27.20	0.00
2010	33.3	4.22	79.52			61.01	26.67	0.00

Bold values in 2007 and 2008 are 70% of expected farm yield

This impact is illustrated by reducing the farm yield for both 2007 and 2008 to 70 percent of the expected or trend yield. In Hettinger County, the BRP guarantee drops from $30.10 in 2008 to $25.11 in 2009, or a 17 percent decline. However, it fully recovers after one year.

The BRP guarantee for the Ward County farm was at $41.42 for both 2007 and 2008, but declined to $33.72 in 2009 and declined again for 2010 to $31.88. This would be a 23 percent drop in the safety net from 2008 to 2010.

The situation in Cavalier County was most extreme. The BRP guarantee for this farm was at $51.17 in 2007, then declined every year through 2010, when it reached $26.67. This would be a 48 percent decline in the BRP safety net for this farm.

Conclusions

The BRP-RCCP program is innovative in that it targets both yield and price, thus combining the yield guarantee of the crop insurance program and the price guarantee of the current government program.

The BRP-RCCP programs versus the current farm programs show mixed results for the spring wheat analysis. The differences are dependent on the yield variability of the county. The county with the most yield variability (Hettinger) faired much better under the BRP-RCCP programs. The BRP-RCCP programs show promise in providing a safety net for farmers. A significant weakness shows up when low yields occur multiple years in a row, as often occurs with regionalized wet or dry periods. The BRP guarantee is based on three of the most recent five years, which means multiple low years significantly lower the safety net for individual farms. A national study needs to be completed for all program crops to evaluate the program further.

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CONTACT INFORMATION

We would be happy to provide a single copy of this publication free of charge. You can address your inquiry to: Carol Jensen, Department of Agribusiness and Applied Economics, North Dakota State University, P.O. Box 5636, Fargo, ND, 58105-5636, Ph. 701-231-7441, Fax 701-231-7400, e-mail Carol.Jensen@ndsu.edu. This publication is also available electronically at: http://agecon.lib.umn.edu/.

Department of Agribusiness and Applied Economics
Agricultural Experiment Station
North Dakota State University
Fargo, ND 58105-5636