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Food and Agricultural  
Policy Research Institute



April 2007

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**Staff Report**

# Impacts of a National Association of Wheat Growers Proposal for the 2007 Farm Bill

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## Summary

At the request of Senators Baucus and Crapo and Representatives Salazar and Musgrave, the Food and Agricultural Policy Research Institute at the University of Missouri–Columbia provides this estimation of the potential impacts of a 2007 farm bill proposal submitted by the National Association of Wheat Growers.

The NAWG proposal increases the direct payment rate for wheat to \$1.19 per eligible bushel, and the target price to \$5.29 per bushel.

The proposal is evaluated in relation to FAPRI's 2007 stochastic baseline for U.S. agricultural markets. The proposal would have significant impacts on wheat producer returns, government program costs, and farm income, but only modest impacts on commodity supply, use and prices. Here are the highlights of our estimate of impacts:

- The increase in wheat direct payments and the potential for larger wheat countercyclical payments results in a small increase in wheat production.
- The estimated effects on production are small because direct and countercyclical payments are tied to fixed base acreage and program yields, rather than actual production levels.
- Annual direct payments increase by almost \$20 per base acre.
- The effect on countercyclical payments depends on market prices. Across 500 stochastic outcomes, the average annual increase in countercyclical payments is \$4.48 per base acre.
- Net government spending by the Commodity Credit Corporation increases by a total of \$7.6 billion over fiscal years 2008-2012 and by \$16.5 billion over fiscal years 2008-2017.
- The increase in government payments is partially offset by increases in rental payments to nonoperator landlords and other costs of production.
- Net farm income increases by a total of \$6.0 billion over calendar years 2008-2012.

## **Impacts of a National Association of Wheat Growers Proposal for the 2007 Farm Bill**

The National Association of Wheat Growers recommends an increase in direct payment rates and target prices for wheat as part of a 2007 farm bill proposal. Senators Baucus and Crapo and Representatives Salazar and Musgrave asked the Food and Agricultural Policy Research Institute to evaluate the NAWG proposal.

### **The NAWG proposal**

The NAWG proposal calls for an:

1. increase in the wheat direct payment rate from the current \$0.52 to \$1.19 per eligible bushel,
2. increase in the wheat target price from the current \$3.92 to \$5.29 per bushel, and
3. extension of the current marketing loan program, but with a separate classification for hard white wheat.

The FAPRI modeling system does not distinguish wheat by type, so this report does not examine the implications of a separate classification for hard white wheat. The report does examine the consequences of increasing the wheat direct payment rate and target price as proposed by NAWG.

### **Modeling approach**

The analysis is conducted by comparing results of a scenario that incorporates the NAWG wheat direct payment rate and target price proposals to a baseline that reflects a continuation of current government policies from the 2002 farm bill.

The point of reference for this analysis is the FAPRI stochastic baseline prepared in January and February 2007 and based on information available in mid-January. The stochastic baseline consists of 500 sets of alternative future agricultural market outcomes. These 500 alternative outcomes share a common assumption that provisions of the 2002 farm bill that are currently scheduled to expire in 2007 will instead be extended indefinitely. The outcomes differ from one another in assumptions about the weather, petroleum prices and other factors that affect agricultural commodity supply and demand. More detail on the 2007 FAPRI stochastic baseline can be found in the "FAPRI U.S. Baseline Briefing Book," on the FAPRI website [www.fapri.missouri.edu](http://www.fapri.missouri.edu).

The analysis is conducted by starting from the stochastic baseline, making the specified changes in wheat direct payments and target prices (effective with the 2008/09 marketing year) and solving the FAPRI stochastic model. The result is a complete new set of stochastic results—500 outcomes over ten years for each of more than 1,000 variables.

The tables in this report summarize the results by reporting average changes from baseline results across all of the stochastic outcomes for selected variables.

## **Results**

### Producer returns and crop supplies

The assumed increase in wheat direct payment rates is \$0.67 per eligible bushel, or 129% (Table 1). This results in a \$19.65 increase in annual direct payments per wheat base acre. The increase in wheat direct payments provides a substantial amount of additional income to producers with wheat base acreage, but has only a very small estimated impact on production. To be eligible for wheat direct and countercyclical payments, producers are not required to grow wheat or any other crop, although their ability to produce fruits and vegetables is restricted. Because the payments are largely decoupled from production and prices, the FAPRI model assumes they have only minor impacts on crop production.

The \$1.37 per bushel increase in the wheat target price increases the potential wheat countercyclical payment rate by \$0.70 per eligible bushel (the \$1.37 change in the target price minus the \$0.67 increase in the direct payment rate). The actual impact on countercyclical payment rates depends on market prices. If season-average market prices exceed \$4.10 per bushel, as they do in about half of the 500 alternative outcomes, then there are no countercyclical payments. However, when market prices are lower, there is an increase in countercyclical payments relative to the baseline. Across all 500 outcomes for 2008/09 – 2012/13, the average increase in countercyclical payments is \$4.48 per base acre.

As with direct payments, countercyclical payments are tied to base acreage, rather than current production. Unlike direct payments, countercyclical payments are tied to market prices, so they may play an insurance role not played by direct payments. The FAPRI model assumes that each dollar of countercyclical payments has a larger impact on production than a dollar of direct payments and a smaller impact than a dollar of revenue from the market sales or the marketing loan program.

**Table 1. Effects of Wheat Policy Changes**

	Higher Wheat		Absolute Difference	Percentage Difference
	Baseline	Target Price and Direct Payment		
<b>Wheat Program Provisions</b>	(Dollars per Bushel, 2008/09 - 2012/13 Average)			
Wheat Direct Payment Rate	0.52	1.19	0.67	128.8%
Wheat Target Price	3.92	5.29	1.37	34.9%
Wheat Loan Rate	2.75	2.75	0.00	0.0%
<b>Wheat Sector Supply and Use</b>	(Million Bushels, 2008/09 - 2012/13 Average)			
Wheat Production	2,125	2,135	9	0.4%
Wheat Domestic Use	1,283	1,284	2	0.1%
Wheat Exports	944	951	7	0.7%
<b>Crop Planted Acreage</b>	(Million Acres, 2008/09 - 2012/13 Average)			
Wheat	57.92	58.18	0.26	0.4%
11 Other Crops Plus Hay	257.35	257.38	0.04	0.0%
Conservation Reserve Area	32.69	32.67	-0.01	0.0%
12 Crops + Hay + CRP	347.95	348.23	0.28	0.1%
<b>Wheat Prices and Returns</b>	(Dollars, 2008/09 - 2012/13 Average)			
Wheat Farm Price/Bushel	4.13	4.13	-0.01	-0.2%
Wheat Market Value/Acre	177.41	177.08	-0.33	-0.2%
Wheat LDF/Acre	0.03	0.03	0.00	12.6%
Wheat CCP/Base Acre	0.11	4.59	4.48	4005.7%
Wheat DP/Base Acre	15.25	34.90	19.65	128.8%
Wheat Total Returns/Harv. Base Acre	192.80	216.60	23.79	12.3%
<b>Net CCC Outlays*</b>	(Million Dollars, FY2008 - FY2012 Total)			
Wheat	5,887	13,479	7,592	129.0%
Other CCC Outlays	51,382	51,384	2	0.0%
Total	57,269	64,862	7,593	13.3%
<b>Farm Income</b>	(Billion Dollars, 2008 - 2012 Total)			
Government Payments	55.46	64.31	8.85	16.0%
Crop Receipts	737.44	737.45	0.01	0.0%
Livestock Receipts	641.79	641.75	-0.03	0.0%
Rent to Nonoperator Landlords	68.20	70.62	2.42	3.6%
Other Production Costs	1,273.86	1,274.65	0.79	0.1%
Other Net Farm Income	218.50	218.88	0.39	0.2%
Net Farm Income	311.12	317.13	6.00	1.9%

\* Note: The estimated 10-year (FY 2008-FY 2017) increase in CCC net outlays is \$16,509 million.

### Wheat supply, use and prices

The average increase in wheat acreage resulting from the increase in wheat direct payment rates and target prices is just 260,000 acres, or 0.4%. The resulting 9 million bushel average increase in wheat production reduces average wheat market prices by about \$0.01 per bushel. Lower wheat prices, in turn, result in modest increases in wheat exports and domestic use. Note that the changes in wheat production, use and prices are all less than 1%.

### Other commodities

While the effect of the NAWG proposal on wheat market supply, demand and prices is small, the impacts on other commodities are even smaller. Soybean acreage increases marginally because of an increase in wheat and soybean double cropping, and the conservation reserve shrinks slightly as a few more producers choose not to extend expiring contracts. With little effect on acreage, impacts on production and prices of other commodities are negligible.

### Government farm program spending

Net outlays by the Commodity Credit Corporation are increased by \$7.6 billion over the five year period from fiscal year 2008 to fiscal year 2012. Direct payments account for most of the increase. The impact on spending in FY 2008 is less than in subsequent years because most of the payments associated with the 2008/09 crop are not made until after October 1, 2008, which begins FY 2009.

### Farm income

Producers with wheat base acreage clearly benefit from the increase in direct payments and the potential increase in countercyclical payments. Over calendar years 2008-2012, the total increase in government payments is \$8.9 billion. This exceeds the FY 2008 – FY 2012 increase in government outlays because of the difference between calendar and fiscal years.

The increase in government payments is partially offset by a \$2.4 billion increase in rental payments to nonoperator landlords. When returns to wheat base acreage increase, the model assumes that at least some of the increase is captured by landlords. Other operating costs also increase, but so do some other components on the income side of the net farm income ledger. Net farm income increases by a total of \$6.0 billion over the 2008-2012 period.



## **Concluding comments**

The main impact of the NAWG proposal is to increase government payments to producers with wheat base acreage. Effects on agricultural markets are small, largely because the payments that are increased are largely decoupled from current production decisions.

Further detail on wheat market effects is provided in Table 2. Table 3 provides fiscal year estimates of impacts on government farm program outlays, while Table 4 reports changes in government payments on a crop year basis. Table 5 provides annual estimates of changes in net farm income. The Congressional request letter is reproduced in Appendix A.

**Table 2. Effects of Wheat Policy Changes on U.S. Wheat Supply and Use**

Crop Year	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17
<b>Area</b>										
	(Million Acres)									
Base Area	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Planted Area	0.0	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2
Harvested Area	0.0	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
<b>Yield</b>										
	(Bushels per Acre)									
Actual	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Program, Direct	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Program, CCP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Supply</b>										
	(Million Bushels)									
Beginning Stocks	0	9	13	13	12	11	11	11	11	11
Production	0	-1	2	3	3	3	3	3	3	3
Imports	0	10	11	9	9	9	8	8	8	8
Exports	0	0	0	0	0	0	0	0	0	0
<b>Domestic Use</b>										
Feed, Residual	0	2	2	2	2	1	1	1	1	1
Seed	0	1	1	1	1	1	1	1	1	1
Food, Other	0	0	0	0	0	0	0	0	0	0
<b>Exports</b>										
Total Use	0	5	8	8	7	7	7	7	7	7
<b>Ending Stocks</b>										
CCC Inventory	1	7	9	9	9	9	8	8	8	8
Under Loan	-1	2	3	3	3	3	3	3	3	3
Other Stocks	0	0	0	0	0	0	0	0	0	0
<b>Prices and Returns</b>										
	(Dollars)									
Farm Price/bu.	0.00	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Loan Rate/bu.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average LDP Rate/bu.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Target Price/bu.	0.00	1.37	1.37	1.37	1.37	1.37	1.37	1.37	1.37	1.37
CCP Rate/bu.	0.00	0.17	0.16	0.14	0.14	0.13	0.13	0.14	0.14	0.13
Direct Payment/bu.	0.00	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67
Gross Market Revenue/a.	-0.01	-0.31	-0.37	-0.34	-0.33	-0.32	-0.30	-0.30	-0.31	-0.31
LDP Revenue/a.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Variable Expenses/a.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mkt + LDP Net Returns/a.	-0.01	-0.31	-0.37	-0.34	-0.32	-0.31	-0.30	-0.30	-0.31	-0.31
CCP Revenue/Base a.	0.00	5.27	4.81	4.27	4.16	3.87	3.97	4.38	4.28	3.89
Direct Payment/Base a.	0.00	19.65	19.65	19.65	19.65	19.65	19.65	19.65	19.65	19.65

**Table 3. Effects of Wheat Policy Changes on CCC Net Outlays**

Fiscal Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
(Million Dollars)										
<b>Feed Grains</b>										
Corn	0	0	0	0	0	0	0	0	1	1
Sorghum	0	0	0	0	0	0	0	0	0	0
Barley	0	0	0	0	0	0	0	0	0	0
Oats	0	0	0	0	0	0	0	0	0	0
<b>Food Grains</b>										
Wheat	0	325	1,864	1,830	1,791	1,782	1,760	1,768	1,799	1,792
Rice	0	0	0	0	0	0	0	0	0	0
<b>Oilseeds</b>										
Soybeans	0	0	1	0	1	1	1	2	2	2
Peanuts	0	0	0	0	0	0	0	0	0	0
Other Oilseeds	0	0	0	0	0	0	0	0	0	0
<b>Other Commodities</b>										
Upland Cotton	0	0	0	0	0	1	0	0	0	0
Sugar	0	0	0	0	0	0	0	0	0	0
Dairy	0	0	0	0	0	0	0	0	0	0
<b>CCC Conservation</b>										
Conservation Reserve	0	0	-1	-1	-1	-1	-2	-2	-2	-2
Other CCC Conservation	0	0	0	0	0	0	0	0	0	0
<b>Tobacco Trust Fund</b>	0	0	0	0	0	0	0	0	0	0
<b>Other</b>										
Disaster Payments, NAP	0	0	0	0	0	0	0	0	0	0
Other Net Costs	0	0	0	0	0	0	0	0	0	0
<b>Net CCC Outlays</b>	0	325	1,864	1,831	1,791	1,782	1,761	1,770	1,801	1,792

**Table 4. Effects of Wheat Policy Changes on Selected Government Payments**

Crop Year	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17
(Million Dollars)										
Direct Payments	0	1,467	1,468	1,469	1,469	1,469	1,469	1,469	1,469	1,469
Marketing Loans	0	0	1	1	1	2	2	2	2	2
Countercyclical Payments	0	397	363	323	314	292	301	332	324	294
<b>Total</b>	0	1,864	1,831	1,792	1,784	1,763	1,772	1,803	1,795	1,765

Note: Includes direct payments, marketing loans (loan deficiency payments and marketing loan gains) and countercyclical payments for feed grains, food grains, oilseeds, and upland cotton.

**Table 5. Effects of Wheat Policy Changes on Farm Income**

Calendar Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	(Billion Dollars)									
1. Farm Receipts	0.00	0.01	0.01	0.00	-0.01	-0.01	0.00	0.00	0.00	0.00
Crops	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Livestock	0.00	0.00	0.00	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
Farm-Related	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00
2. Government Payments	0.15	1.63	1.85	1.82	1.79	1.77	1.76	1.78	1.80	1.78
3. Gross Cash Income (1 + 2)	0.15	1.64	1.86	1.81	1.78	1.77	1.76	1.78	1.80	1.78
4. Nonmoney Income	0.00	0.00	0.03	0.07	0.10	0.13	0.15	0.17	0.19	0.21
5. Value of Inventory Change	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6. Gross Farm Income (3 + 4 + 5)	0.15	1.67	1.89	1.88	1.88	1.90	1.91	1.95	1.99	1.99
7. Cash Expenses	0.01	0.23	0.49	0.64	0.71	0.76	0.80	0.83	0.86	0.89
8. Total Expenses	0.01	0.23	0.52	0.72	0.83	0.92	0.98	1.04	1.10	1.15
9. Net Cash Income (3 - 7)	0.13	1.41	1.37	1.18	1.07	1.01	0.96	0.95	0.94	0.89
10. Realized Net Farm Inc (3 + 4 - 8)	0.13	1.41	1.37	1.17	1.05	0.98	0.93	0.91	0.89	0.83
11. Net Farm Income (6 - 8)	0.13	1.44	1.37	1.17	1.05	0.98	0.93	0.91	0.89	0.84
Deflated (1997 \$)	0.11	1.14	1.06	0.88	0.78	0.71	0.66	0.64	0.61	0.56

**Appendix A. Copy of Congressional Request**

**Congress of the United States**  
Washington, DC 20515

March 21, 2007

Dr. Abner Womack  
Co-Director  
Food and Agricultural Policy Research Institute  
Department of Agricultural Economics  
University of Missouri – Columbia  
101 S. Fifth Street  
Columbia, MO 65201

Dear Dr. Womack:

We write to request the assistance of the Food and Agricultural Policy Research Institute (FAPRI) in evaluating the proposed federal farm policy prepared by the National Association of Wheat Growers (NAWG). FAPRI's work will aid us in our efforts to prepare for Congress' work on the next farm bill.

Details of the NAWG plan are attached.

We request FAPRI's best estimates as to the impact of the plan, as well as each element of it, on farm income, its costs to the federal government, and the effects it would have on agricultural production, market prices and world trade.

Please feel free to contact any of our offices, or the staff at NAWG, should you have any questions. We look forward to receiving your findings.

Sincerely,



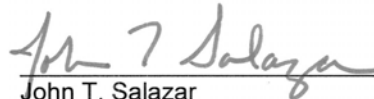
Mike Crapo  
United States Senator



Max Baucus  
United States Senator



Marilyn Musgrave  
Member of Congress



John T. Salazar  
Member of Congress

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