Government Program Payments for Crop Cost-Return Budgets

Department of Agricultural Economics

Kansas State University Agricultural Experiment Station and Cooperative Extension Service

Bradley D. Lubben
Agricultural Economist, NE

Terry L. Kastens
Agricultural Economist
Crop Production

The Farm Security and Rural Investment Act of 2002 combines elements of the 1990 and 1996 Farm Bills in establishing farm policy for the next 6 years. Marketing loans remain in place under the new farm bill and the direct, or fixed payments that were introduced in the 1996 Farm Bill continue. Marketing loans are available on actual production, and provide benefits when the local posted county price of a commodity is below that county's adjusted loan rate. Thus, expected benefits under the marketing program can be estimated with expected local market prices and need not be estimated separately.

Direct payments are determined according to the following formula for each crop: Direct Payment = Direct Payment Rate × Program Acreage Base × Direct Payment Yield × 85 percent. Thus, fixed payments are a function of the base acreage and payment yield decisions made at initial program sign-up.

In addition, a new system of counter-cyclical payments have been added to the mix, resulting in a complex safety net. The counter-cyclical payments under the 2002 Farm Bill are similar to the target price/deficiency-payment system in place under the 1990 Farm Bill. Like direct payments, counter cyclical payments are tied to the base acreage and payment yield decisions made at initial program sign-up and are calculated according to the following formula for each crop: Counter-Cyclical Payment = Counter-Cyclical Payment Rate × Program Acreage Base × Counter-Cyclical Payment Yield × 85 percent. For each year of the new farm bill, the counter-cyclical payment rate for each crop is equal to the target price for that crop minus the direct payment rate minus the higher of the national average marketing year price or the national average loan rate. Thus, the counter-cyclical payment can vary each year, dependent on market prices.

Estimating direct payments per acre is a function of the legislated payment rates as well as the base acreage and payment yield decision made by the producer at sign-up in the first year of the new farm bill. Estimating counter-cyclical payments per acre is a function of the base acreage and payment yield decision too, but also depends on expected market prices over the life of the farm bill. As such, the choice of expected market prices is critical to determining expected government payments.

Using the loan rates, direct payment rates, and target prices as set in the farm bill (Table 1), expected government payments can be calculated under various market price scenarios. One scenario is the marketing year average prices determined from K-State models using futures market price quotes for coming months as an indicator of expected market prices for those months. Those price estimates, made as of September 9, 2002, are reported in Table 2. An alternative scenario is the baseline price series estimated by the Food and Agricultural Policy Research Institute (FAPRI) in their July 2002 Farm Bill analysis (Table 3).

The program payment values listed in the crop cost-return budgets in the Farm Management Guide series are based on an analysis of a set of Kansas Farm Management Association farms regarding program sign-up decisions. Based on optimal sign-up decisions, direct and counter-cyclical payments were estimated for the resulting program

Table 1. *Loan Rates, Direct Payment Rates, and Target Prices for Program Commodities*

Crop	Loan Rates		Direct (Fixed) Payment Rates	Target Prices	
	2002-2003	2004-2007	2002-2007	2002-2003	2004-2007
Corn (bu)	$1.98	$1.95	$0.28	$2.60	$2.60
Sorghum (bu)	$1.98	$1.95	$0.35	$2.54	$2.54
Barley (bu)	$1.88	$1.85	$0.24	$2.21	$2.21
Oats (bu)	$1.35	$1.33	$0.024	$1.40	$1.40
Wheat (bu)	$2.80	$2.75	$0.52	$3.86	$3.86
Soybeans (bu)	$5.00	$5.00	$0.44	$5.80	$5.80
Minor Oilseeds (lb)	$0.096	$0.093	$0.008	$0.098	$0.098
Rice (cwt)	$6.50	$6.50	$2.35	$10.50	$10.50
Upland cotton (lb)	$0.5200	$0.5200	$0.0667	$0.7240	$0.7240

acreage bases and payment yields for the farms in the analysis. Direct payments were estimated for the life of the 2002 Farm Bill while counter-cyclical payments were estimated separately for 2003 and for the average of 2004-2007.

The estimated direct payments are listed in the second column of Table 4 by Kansas Farm Management Association region and are designed to be used for yield level II in the cost-return budgets. Counter-cyclical payments are estimated for 2003 and for 2004-2007 under both the K-State price projections and the FAPRI price projections. These estimated payments are listed in columns 3 through 6 of Table 4. Tables 5 and 6 outline payments that are 8 percent higher and lower than Table 4 payments, and are designed to be used with yield levels I and III in the cost-return budgets.

Table 2. *Estimated National Average Marketing Year Prices, K-State*[a]

	Marketing Year Average Prices (Beginning Year of Harvest) ($/bushel)					
Crop (Marketing Year)	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**
Wheat (June-May)	$ 3.91	$ 3.75	$ 3.59	$ 3.49	$ 3.42	$ 3.38
Corn (September-August)	2.72	2.45	2.36	2.32	2.30	2.29
Milo (September-August)	2.50	2.24	2.17	2.14	2.14	2.13
Soybeans (September August)	5.55	5.21	5.35	5.44	5.50	5.53

[a]*Estimated by a futures-based national average price model, Kansas State University, September 9, 2002.*

Table 3. *Estimated National Average Marketing Year Prices, FAPRI*[a]

	Marketing Year Average Prices (Beginning Year of Harvest) ($/bushel)					
Crop (Marketing Year)	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**
Wheat (June-May)	$ 2.95	$ 2.93	$ 3.04	$ 3.07	$ 3.17	$ 3.23
Corn (September-August)	2.03	2.04	2.10	2.15	2.19	2.23
Milo (September-August)	1.91	1.91	1.97	2.02	2.06	2.09
Soybeans (September August)	4.44	4.68	4.83	4.96	5.07	5.21
Upland Cotton (August July)	0.385	0.423	0.448	0.471	0.482	0.508

[a]*Estimated by the Food and Agricultural Policy Research Institute, University of Missouri, July, 2002.*

Table 4. *Estimated Direct and Counter-cyclical Payments per Acre of Cropland by Farm Management Association Region, 2003-2007, Yield Level II ($/Acre)*[a]

		(Using K-State projected prices)		(Using FAPRI projected prices)	
Region of Kansas	**Direct Payments**	**Counter-cyclical Payments (2003)**	**Average Counter-cyclical Payments (2004-2007)**	**Counter-cyclical Payments (2003)**	**Average Counter-cyclical Payments (2004-2007)**
NW	$ 12.33	$ 0.08	$ 0.90	$ 11.54	$ 7.73
SW	13.66	0.05	1.10	11.62	8.04
NC	14.05	0.09	1.27	11.85	8.49
SC	15.30	0.17	1.08	13.27	9.28
NE	13.48	0.92	1.61	12.74	9.22
SE	11.31	0.76	1.23	9.73	7.26

[a]*The estimated government payments in each crop budget for 2003 are based on the estimated direct payment plus the estimated counter-cyclical payment for 2003 using K-State projected prices.*

Table 5. *Estimated Direct and Counter-cyclical Payments per Acre of Cropland by Farm Management Association Region, 2003-2007, Yield Level I ($/Acre)[a]*

		(Using K-State projected prices)		(Using FAPRI projected prices)	
Region of Kansas	**Direct Payments**	**Counter-cyclical Payments (2003)**	**Average Counter-cyclical Payments (2004-2007)**	**Counter-cyclical Payments (2003)**	**Average Counter-cyclical Payments (2004-2007)**
NW	$ 11.34	$ 0.07	$ 0.83	$ 10.62	$ 7.11
SW	12.57	0.05	1.01	10.69	7.40
NC	12.93	0.08	1.17	10.90	7.81
SC	14.08	0.16	0.99	12.21	8.54
NE	12.40	0.85	1.48	11.72	8.48
SE	10.41	0.70	1.13	8.95	6.68

[a]The estimated government payments in each crop budget for 2003 are based on the estimated direct payment plus the estimated counter-cyclical payment for 2003 using K-State projected prices.

Table 6. *Estimated Direct and Counter-cyclical Payments per Acre of Cropland by Farm Management Association Region, 2003-2007, Yield Level III ($/Acre)[a]*

		(Using K-State projected prices)		(Using FAPRI projected prices)	
Region of Kansas	**Direct Payments**	**Counter-cyclical Payments (2003)**	**Average Counter-cyclical Payments (2004-2007)**	**Counter-cyclical Payments (2003)**	**Average Counter-cyclical Payments (2004-2007)**
NW	$ 13.32	$ 0.09	$ 0.97	$ 12.46	$ 8.35
SW	14.75	0.05	1.19	12.55	8.68
NC	15.17	0.10	1.37	12.80	9.17
SC	16.52	0.18	1.17	14.33	10.02
NE	14.56	0.99	1.74	13.76	9.96
SE	12.21	0.82	1.33	10.51	7.84

[a]The estimated government payments in each crop budget for 2003 are based on the estimated direct payment plus the estimated counter-cyclical payment for 2003 using K-State projected prices.

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