FARM BUSINESS MANAGEMENT

FARM ECONOMICS Facts & Opinions

Department of Agricultural and Consumer Economics • College of Agriculture, Consumer and Environmental Sciences
University of Illinois at Urbana-Champaign

June 14, 2002 **FEFO 02-12**

COMPARISON OF GOVERNMENT FARM PROGRAM PAYMENTS FOR REPRESENTATIVE ILLINOIS GRAIN FARMS UNDER THE 1996 AND 2002 FARM BILL

Considerable discussion has arose concerning the level of government expenditures estimated under the recently passed Farm Security and Rural Investment Act of 2002, hereafter referred to as the 2002 Farm Bill, as compared to the 1996 Federal Agriculture Improvement and Reform Act (FAIR), the 1996 Farm Bill. Popular press articles have indicated as much as a seventy percent increase in government payments under the new bill. Generally, these comparisons have not taken in consideration the additional marketing loss assistance payments that have been paid since 1998. This paper looks at provisions contained in the Commodity Title of the new Farm Bill and estimates payments for representative Illinois grain farms for 2001 under the 1996 Farm Bill and the 2002 Farm Bill. Caution must be taken in reviewing the results as these estimates are based on a current understanding of provisions of the new Bill. Final regulations have not been released.

The 2002 Farm Bill replaces production flexibility contract payments with direct payments. Market loss assistance and oilseed payments, which have been legislated year-to-year since 1998, have been replaced to some extent by counter-cyclical payments. Counter-cyclical payments are not guaranteed and are only paid when commodity prices for a given marketing year are below a certain "trigger" level. The 2002 Farm Bill continues the use of loan deficiency and marketing loan payments similar to the 1996 Farm Bill. However, commodity loan rates are changing which may have some impact on the level of these payments. More complete details of the 2002 Farm Bill are contained in previous FEFO's 02-10 and 02-11.

Summary data from Illinois Farm Business Farm Management (FBFM) Association records for northern, central and southern Illinois grain farms were used in the study. Data used from the FBFM summaries included crop yield and acreage information for 1998 through 2001. Current farm program base acreage and yield information was used for Dekalb, McLean and Clay Counties respectfully to represent northern, central and southern Illinois grain farms (Table 1). Government program payment rates were based on provisions contained in the 1996 and 2002 Farm Bills. When calculating estimated payments under the 2002 Farm Bill, provisions that allowed updating of base acres and yields were used when these resulted in the maximum payments. Maximum amounts for the counter-cyclical payments were also assumed.

Total farm production flexibility contract (AMTA) payments for 2001 were estimated by multiplying farm size by current farm program base acre and yield information, and payment amounts listed in Table 2 for 2001. This total was then multiplied by 85 percent, which is the number of base acres producers received payment on. Market loss assistance and oilseed payments were calculated in a similar manner. Loan deficiency payments were based on the average effective Illinois LDP rate times actual production. Total dollar estimates were then divided by the tillable acres in the farm to get a per acre amount. These per acre amounts were then compared with actual farm record data for validation purposes.

Table 1. Characteristics of Representative Illinois Grain Farms.

	Northern	Central	Southern
Total tillable acres	868	1002	1152
Operator tillable acres	789	671	928
FSA percent acreage base			
Corn	67.3	54.9	34.3
Wheat	1.5	0.7	19.6
Grain sorghum	na	na	2.9
FSA yield base			
Corn	130.0	124.6	88.4
Wheat	54.4	50.7	39.9
Grain sorghum	na	na	66.9
2001 actual yields			
Corn	159	168	151
Soybeans	48	50	45
Wheat	79	75	60
Grain sorghum	na	na	102
2001 percent actual planted			
Corn	53.9	49.7	43.0
Soybeans	45.4	48.0	45.9
Wheat	0.7	2.3	7.1
Grain sorghum	na	na	4.0

Table 2. Government Farm Program Payment Rates for 1996 through 2001 Under the 1996 Farm Bill.

	1996	1997	1998	1999	2000	2001
	cents per bushel					
Production flexibility contract - corn	$0.251	$0.486	$0.377	$0.363	$0.334	$0.269
Production flexibility contract - wheat	$0.874	$0.631	$0.663	$0.637	$0.588	$0.474
Market loss assistance - corn			$0.187	$0.363	$0.363	$0.307
Market loss assistance - wheat			$0.329	$0.637	$0.637	$0.540
Oilseed				$0.141	$0.143	$0.121
Loan deficiency payments (effective rate)						
Corn			$0.11	$0.23	$0.26	$0.14
Soybeans			$0.46	$0.88	$0.94	$1.17
Wheat			$0.17	$0.38	$0.32	$0.23

Estimated per acre payments for a northern Illinois grain farm were $20.33 for production flexibility contracts, $25.70 for market loss assistance and oilseed payments and $43.69 for loan deficiency and marketing loan payments. This totals $89.72 per acre. Total amounts were $84.29 per acre for central Illinois and $63.54 for southern Illinois (Table 3). Southern Illinois farms have lower payments primarily due to lower corn acre and yield program bases.

Table 3. Estimated Payments for 2001 for Illinois Grain Farms Under the 1996 Farm Bill

	Northern	Central	Southern
	$ per acre		
Production flexibility (AMTA)	$20.33	$17.07	$10.62
Market loss assistance	23.21	19.48	12.11
Oilseed	2.49	2.96	2.22
Subtotal	25.70	22.44	14.33
Loan deficiency	43.69	44.78	38.59
Total	$89.72	$84.29	$63.54

Total farm direct payments for 2001 under the 2002 Farm Bill were estimated by multiplying farm size by current or updated farm program base acre and current program yield information and payment rates listed in Table 4. This total was then multiplied by 85 percent, which is the number of base acres producers received payment for.

Table 4. Target Prices, Loan Rates, and Maximum Counter-Cyclical Payments, 2002 - 2003.

	Corn	Soybeans	Wheat
	$ per bu.		
Target price	$2.60	$5.80	$3.86
Direct payment rate	0.28	0.44	0.52
Trigger price [1]	2.32	5.36	3.34
Loan rate	1.98	5.00	2.80
Max. counter-cyclical payment [2]	0.34	0.36	0.54

[1] Trigger price equals target price less direct payment rate.
[2] Equals trigger price minus loan rate.

Counter-cyclical payments were estimated by multiplying farm size by current or updated farm program base acre and yield information and maximum counter-cyclical rates. This total was also multiplied by 85 percent, the amount of acres that are eligible for payment. Assuming maximum counter-cyclical payments for corn, soybeans, wheat and grain sorghum for the 2001 crop is somewhat problematic. Counter-cyclical payments are determined by subtracting from the trigger price the higher of the average marketing year price or the loan rate. We are currently in the marketing year for these crops and do not know what the average will be for the year. The average marketing year price for soybeans will be below the loan rate resulting in the maximum CC rate. However, the average marketing year price for corn, wheat and grain sorghum may not result in the maximum CC rate.

Loan deficiency payments were based on average effective Illinois LDP rates adjusted for the change in the national loan rate times the actual production. The change in loan rates resulted in a higher LDP rate for corn and a lower LDP rate for soybeans. The net result was very little change in total LDP's. It is uncertain how changes in loan rates and the way posted county prices are calculated will effect the change in loan deficiency payments given the same market prices. Total direct, counter-cyclical and loan deficiency payments were then divided by the tillable acres in the farm to get a per acre amount.

Table 5. Estimated Payments for 2001 for Illinois Grain Farms Under the 2002 Farm Bill

	Northern	Central	Southern
	----------$ per acre ----------		
Direct	$25.61	$22.22	$16.50
Counter-cyclical [1]	29.29	29.36	22.19
Loan deficiency	46.95	46.43	40.82
Total	$101.85	$98.01	$79.51

[1] Assumes maximum counter-cyclical payments

Estimated direct payments that would have been made in 2001 under the 2002 Farm bill would have been $25.61 for northern Illinois grain farms, $22.22 for central Illinois and $16.50 for southern Illinois. Payments are higher in northern Illinois due to higher corn base acres. Maximum counter-cyclical payments would have been $29.29, $29.36 and $22.19 for northern, central and southern grain farms respectively. Central and southern Illinois grain farms are able to narrow the gap with northern Illinois grain farms regarding the level of counter-cyclical payments due to the fact it is advantageous for them to use updated acreage and yield bases where it isn't for northern Illinois grain farms. Northern Illinois grain farms would have their corn base reduced too much to make it profitable to update base yields. Total payments, including LDP's, are $101.85 per acre for northern Illinois grain farms, $98.01 for central and $79.51 for southern Illinois grain farms.

Table 6 lists the estimated total payments and the difference per acre for northern, central, and southern Illinois grain farms for 2001 between the 1996 and the 2002 Farm Bills. The payments under the 2002 Farm Bill are $12.13, $13.72 and $15.97 higher than payments under the 1996 Farm Bill respectively for northern, central and southern Illinois representative grain farms. This amounts to a 13.5%, 16.3% and

Table 6. Difference in Estimated Payments for Illinois Grain Farms Between the 1996 and the 2002 Farm Bills

	Northern	Central	Southern
	----------$ per acre ----------		
2002 Farm Bill [1]	$101.85	$98.01	$79.51
1996 Farm Bill	89.72	84.29	63.54
Difference	$12.13	$13.72	$15.97

[1] Assumes maximum counter-cyclical payments

25.1% increase when 2002 Farm Bill estimated payments are compared to the 1996 Farm Bill. However, one needs to remember that the counter-cyclical payments are not guaranteed and are dependent on commodity price levels. On the other hand, the 1996 Farm Bill payments include MLA and Oilseed payments which were not guaranteed.

One of the decisions producers will be faced with is whether or not to update base acres. If acres are updated, producers will also need to decide whether to update yields or not. There are two alternatives available for updating yields. Which of all these alternatives that results in the maximum direct and counter-cyclical payment may also depend on the payment rate for the counter-cyclical payments. And this rate depends on the average marketing year price. FEFO 02-11 goes into more detail about these alternatives.

Table 7 illustrates (in bold) the alternative that yields the highest direct and counter-cyclical payments under the four alternatives producers have given maximum, fifty percent of maximum and no counter-cyclical payments. As the results illustrate, the alternative which yields the maximum payments can vary depending on each farm's situation. For northern Illinois grain farms, using the current base acres and yields resulted in the maximum payment for all levels of counter-cyclical payments. This is due to the fact that these farms would have their corn based reduced too much to make up for the increase in yield base.

For central Illinois grain farms, updating acres and using the 93.5% alternative for updating yields was the best choice with counter-cyclical payments at the fifty percent or maximum level. However, with no counter-cyclical payments, not updating base acres and yields was the best choice. This is due to the fact that direct payments still use the current program yield and updating acres resulted in fewer corn base acres.

The best choice for southern Illinois farms was updating acres and using the 93.5% yield alternative for updating yields. These farms added corn base acres when updating and also improved their corn base yield.

As one can see by these representative farm results, the decision on which alternative to use when updating base acres and yields may not be easy. A spreadsheet tool to help analyze this decision can be found at the University of Illinois *farmdoc* website:
http://www.farmdoc.uiuc.edu/manage/FarmBill/decisiontool.htm

Table 7. Estimated Direct and Counter-Cyclical Payments Under the 2002 Farm Bill for Different Base Acre and Yield Alternatives

	Northern	Central	Southern
Direct and counter-cyclical with maximum counter-cyclical payments			
	----------$ per acre ----------		
Current base acres and yields	**$54.90**	$48.30	$33.34
Updated acres, current program yields	49.23	46.33	33.57
Updated acres, 70% diff.yields	53.52	51.43	38.23
Updated acres, 93.5% yields	53.20	**51.58**	**38.68**
Direct and counter-cyclical with 50 % of maximum counter-cyclical payments			
	----------$ per acre ----------		
Current base acres and yields	**$40.25**	$35.64	$24.88
Updated acres, current program yields	36.31	34.28	25.03
Updated acres, 70% diff.yields	38.45	36.83	27.37
Updated acres, 93.5% yields	38.30	**36.90**	**27.59**
Direct with no counter-cyclical payments			
	----------$ per acre ----------		
Current base acres and yields	**$25.61**	**$22.98**	$16.41
Updated acres, current program yields	23.39	22.22	**16.50**
Updated acres, 70% diff.yields	23.39	22.22	**16.50**
Updated acres, 93.5% yields	23.39	22.22	**16.50**

Issued by: Dale Lattz and Gary Schnitkey, Department of Agricultural and Consumer Economics