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Missouri Representative Farms
Farm Level Impacts of Three Commodity Title Provisions in the Administration's 2007 Farm Bill Proposal

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Missouri Representative Farms: Farm Level Impacts of Three Commodity Title Provisions in the Administration's 2007 Farm Bill Proposal

The current farm bill, passed in 2002, is set to expire this year. The administration has released a comprehensive proposal for the next farm bill. While the administration's proposal covers all titles of the current farm bill, this report focuses on three provisions of the commodity title:

- proposed increases in direct payment rates,
- proposed reductions in loan rates for many commodities,
- replacement of the current countercyclical payment program with a revenue-based program.

This analysis looks at the financial impacts of these provisions for a sub-set of the Missouri representative farms. This report is a companion to FAPRI Report #11-07, *Impacts of Three Provisions in the Administration's 2007 Farm Bill Proposal* that estimated the impacts of the three provisions on commodity prices, acreage, and government costs. The results of those estimated changes in commodity prices are incorporated into this analysis.

Administration's Proposal

The three provisions of the administration's proposal affecting direct payments, marketing loan benefits and the countercyclical payment program are summarized in Table 1.

Direct Payments

The proposal calls for higher, but uneven direct payment rates for program commodities. For corn, wheat and rice rates are unchanged through 2009. The rates increase for those crops in 2010-2012 then return to baseline levels in 2013.

Soybeans follow the general trend of corn, wheat and rice but with a little twist. Soybean direct payment rates remain at baseline levels ($0.44/bu.) in 2007 then increase in 2008 and 2009 to $0.47/bu. The rate increases again in 2010-2012, to $0.50/bu, before dropping back down to $0.47/bu in 2013.

Cotton direct payment rates increase substantially in 2008 to $0.1108 per pound. They remain above baseline levels throughout the life of the proposed bill.

Table 1. Policy Assumptions of Direct Payment Rates, Loan Rates, and Countercyclical Revenue Trigger.

	Baseline	Administration
Direct Payment Rates	$/bu.	$/bu.
Corn, 2008-2009, 2013+	0.28	0.28
Corn, 2010-2012	0.28	0.30
Soybeans, 2008-2009, 2013+	0.44	0.47
Soybeans, 2010-2012	0.44	0.50
Wheat, 2008-2009, 2013+	0.52	0.52
Wheat, 2010-2012	0.52	0.56
	$/lb	$/lb
Upland Cotton, 2008-2016	0.0667	0.1108
	$/cwt	$/cwt
Rice, 2008-2009, 2013+	2.35	2.35
Rice, 2010-2012	2.35	2.52
Loan Rates (Average of 500 Outcomes)	$/bu.	$/bu.
Corn, 2008-2012	1.95	1.89
Soybeans, 2008-2012	5.00	4.92
Wheat, 2008-2012	2.75	2.58
	$/lb	$/lb
Upland Cotton, 2008	0.5200	0.4185
Upland Cotton, 2009	0.5200	0.4126
Upland Cotton, 2010	0.5200	0.4339
Upland Cotton, 2011	0.5200	0.4544
Upland Cotton, 2012	0.5200	0.4724
	$/cwt	$/cwt
Rice, 2008-2012	6.50	6.50
Countercyclical Revenue Trigger		$/acre
Corn	N/A	344.11
Soybeans	N/A	219.74
Wheat	N/A	140.39
Upland Cotton	N/A	517.00
Rice	N/A	548.05

Marketing Loan Benefits

The administration's proposal is to lower loan rates. Loan rates will be the lesser of:

- the loan rate for the commodity proposed in the 2002 House farm bill, or
- 85 percent of an Olympic average (the average of the most recent five years, excluding the high and the low) of season-average farm prices.

For most commodities this results in new loan rates at the levels proposed in the 2002 House farm bill. Corn, wheat, soybeans, and rice loan rates are slightly lower than current levels, as the House version called for lower loan rates than the final bill. Cotton loan rates are set at the Olympic average of market prices.

Countercyclical Revenue

The current countercyclical payment program, where payments are triggered by price alone, is replaced with a program that triggers payments when the revenue (yields times prices) is lower than national target revenue per acre. Countercyclical revenue payments are made in any given year when the greater of the season-average farm price or the loan rate, multiplied by the national average yield, is less than the target revenue. At the producer level, the program operates in a fashion identical to the current countercyclical payment program. The only difference is the manner in which the payment rate per eligible bushel is determined.

Revenue based countercyclical payments are calculated in the following manner. For each commodity, a target level of national revenue per acre is determined by subtracting the 2002 farm bill direct payment rate from the 2002 farm bill target price, and multiplying the result by the Olympic average of 2002-2006 national yields per harvested acre. If actual national-average revenue per acre is less than the target revenue, then payment rates are calculated by dividing the difference by the current national average countercyclical payment yield. For example, if calculated corn revenue per acre is $11.43 less than the target revenue of $344.11 per acre, then the payment rate will equal $0.10 per eligible bushel, based on the $11.43 shortfall divided by the 114.3 bushel per acre national average countercyclical payment yield. Each producer then receives a payment equal to their base acreage multiplied by the countercyclical payment yield, multiplied by the payment rate ($0.10 per bushel in this example), multiplied by 0.85.

Representative Farm Analysis

This analysis estimates the financial impacts of the proposed provisions on 22 Missouri representative farms that depend on income from program crops. Financial performance over time of the baseline farms assumes continuation of the current farm bill. (See FAPRI-

UMC Report #04-07, *Baseline Outlook: Missouri Representative Farms* for a detailed description of individual farms.) The baseline performance for each farm is compared to simulations under the three provisions of the administration's 2007 farm bill proposal. The three provisions are simulated together. The results are shown for each type of payment in Table 2. The combined effects of all three provisions on payments and farm income are summarized in Table 3.

Direct Payments

The overall increase in direct payments has a positive impact on all of the farms in this study, as shown in Table 2. The impact is greatest on the farm with cotton base acres. Direct payments on this farm are 28 percent higher under the administration's proposal than the baseline. Farms receiving direct payments on base acres of corn, grain sorghum, soybeans, wheat, and/or rice also benefit, but to a lesser degree. For these 21 farms, average annual direct payments over the outlook period are five percent higher under the administration's proposal.

Table 2. Base and Change in Average Annual Direct Payments, Marketing Loan Benefits and Countercyclical Payments (2008-2012) on Missouri Representative Farms.

		Direct Payments		Marketing Loan Benefits		Countercyclical Payments	
		Base	Change	Base	Change	Base	Change
Region	Crop acres	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000
Feedgrain-soy							
NW	2500	36.39	2.09	1.34	-0.21	0.71	-0.53
NW	2300	30.20	1.78	1.50	-0.23	0.53	-0.39
NC	890	10.82	0.58	0.33	-0.05	0.18	-0.13
NC	2050	31.81	1.71	1.08	-0.18	0.54	-0.41
NC	3630	48.23	2.67	1.63	-0.27	0.87	-0.65
NE	2600	41.73	2.32	1.43	-0.23	0.75	-0.56
NE	2300	40.06	2.25	1.60	-0.25	0.74	-0.56
NE	1300	18.19	0.90	0.80	-0.12	0.37	-0.27
WC	1800	31.33	1.76	1.19	-0.18	0.57	-0.43
SW	1100	15.56	0.73	0.60	-0.10	0.27	-0.19
Cotton							
SE	1600	39.72	11.25	26.01	-14.50	29.79	2.14
Rice							
SE	2000	64.07	2.84	16.86	-0.42	9.86	-2.21
SE	4000	189.80	8.01	55.62	-1.28	33.46	-7.20
Crop-beef							
NW	1850	29.08	1.60	1.04	-0.16	0.51	-0.38
NC	1485	17.46	1.22	1.04	-0.16	0.50	-0.37
NE	1460	22.79	1.33	0.82	-0.13	0.47	-0.35
NE	500	8.76	0.48	0.34	-0.06	0.17	-0.12
WC	1400	24.03	1.29	0.67	-0.11	0.43	-0.31
EC	380	5.86	0.34	0.23	-0.03	0.12	-0.09
EC	1500	22.61	1.36	0.95	-0.14	0.50	-0.37
SW	240	3.34	0.14	0.08	-0.01	0.05	-0.04
SW	1800	34.44	1.52	0.91	-0.15	0.52	-0.38

Marketing Loan Benefits

The result of the lower loan rates has a negative, but small impact on marketing loan benefits on all of the representative farms (Table 2). Under baseline market conditions, the

Feedgrain-soy and Crop-beef farms are projected to receive little marketing loan benefits anyway. Therefore, the lower loan rates in the administration's proposal have little effect on these farms.

Cotton and rice farms receive substantially more marketing loan payments under the baseline. As a percent, the cotton farm is impacted the most by the lower loan rates, receiving 55 percent less in marketing loan benefits under the administration's proposal.

Countercyclical Revenue

The change in the countercyclical program negatively impacts all but the cotton farm (Table 2). Under baseline market conditions, the Feedgrain-soy and Crop-beef farms are projected to receive very little income from the countercyclical program. The farms in these two categories average about $500 per year in CC payments in the baseline. These payments drop to an average of just over $100 in the administration's proposal.

The cotton and rice farms are projected to receive significant payments from the countercyclical program in the baseline. The cotton farm sees a small increase in payments under the administration's proposal. However, the two rice farms see payments drop considerably. The change in the countercyclical program results in an average drop in countercyclical payments of 22 percent for the two rice farms.

Total Government Payments

Higher direct payments, lower loan rates, and a new countercyclical revenue program result in higher average annual total government payments for the Feedgrain-soy and Crop-beef farms, and lower average annual total government payments for the Cotton and one of the Rice farms (Table 3). The Feedgrain-soy and Crop-beef total government payments increase by an average of three percent annually. The cotton and rice farms total government payments decrease by an average of less than one percent annually. The 2000 acre rice farm in southeast Missouri has a high percentage of feedgrain acres, both planted and base, and thus has slightly higher total government payments. So, while feedgrain payments increase and cotton and rice payments decrease, the magnitude is not very high in either case.

Table 3. Base and Change in Average Annual Government Payments, Market Receipts, and Net Cash Farm Income (2008-2012) on Missouri Representative Farms.

		Total Government Payments		Market Receipts		Net Cash Farm Income	
		Base $1,000	Change $1,000	Base $1,000	Change $1,000	Base $1,000	Change $1,000
Feedgrain-soy							
NW	2500	38.43	1.36	821.99	-1.19	363.22	0.15
NW	2300	32.23	1.16	732.29	-1.09	373.02	0.06
NC	890	11.33	0.40	232.54	-0.34	128.76	0.03
NC	2050	33.42	1.13	736.79	-1.08	429.33	0.06
NC	3630	50.73	1.75	1236.53	-1.81	757.86	-0.05
NE	2600	43.91	1.53	863.26	-1.27	392.94	0.23
NE	2300	42.41	1.44	961.33	-1.37	526.01	0.06
NE	1300	19.36	0.50	398.19	-0.48	151.09	-0.03
WC	1800	33.09	1.15	682.29	-1.03	258.71	0.05
SW	1100	16.43	0.45	356.64	-0.50	189.45	-0.05
Cotton							
SE	1600	95.52	-1.10	574.06	3.37	138.31	2.14
Rice							
SE	2000	90.79	0.21	850.62	-0.86	208.99	-0.84
SE	4000	278.88	-0.47	1700.96	-1.21	385.20	-2.14
Crop-beef							
NW	1850	30.64	1.05	650.05	-0.94	301.66	0.11
NC	1485	19.00	0.70	460.33	-0.68	243.37	0.01
NE	1460	24.08	0.86	449.95	-0.69	153.83	0.13
NE	500	9.27	0.30	181.86	-0.25	91.57	0.05
WC	1400	25.13	0.87	450.81	-0.67	175.57	0.19
EC	380	6.21	0.21	166.81	-0.19	83.78	0.01
EC	1500	24.06	0.85	572.28	-0.75	201.65	0.07
SW	240	3.47	0.09	83.96	-0.10	90.80	0.02
SW	1800	35.87	1.00	659.80	-0.92	296.79	0.03

Market Receipts

Crop prices are not affected much by the change in policy. Corn, soybeans, wheat and rice prices are within one or two cents of the baseline in the administration's scenario due to little change in acreage planted for each of these crops nationally. However, cotton prices, while not much higher, are above baseline in each year of the administration's scenario. The lower marketing loan benefits for cotton result in a reduction in acreage of cotton planted and a slight increase in cotton market prices.

The modest changes in crop prices have a minimal effect on the market receipts of the representative farms. Of the 22 representative farms, 21 have lower average annual market receipts under the administration's proposal when compared to the baseline. The cotton farm has higher average annual market receipts. All of the changes in market receipts are less than one percent.

Net Cash Farm Income

The impact on net cash farm income for the majority of the farms is minimal. Net cash farm income on 21 of the 22 representative farms changes by less than one percent. The cotton farms net cash farm income increases by about 2 percent annually.

Sixteen of the 22 representative farms show a very small increase in net cash farm income under the administration's proposal. This is less than one percent annually. The cotton farm realizes the largest gain in net cash farm income at about two percent annually. Five of the 22 representative farms have a reduction in net cash farm income under the administration's proposal. Two of the five are rice farms. These two rice farms are impacted the most by change in the countercyclical program. The other three farms with lower net cash farm income raise corn, soybeans and wheat. For two of these farms (3630 acre and 1100 acre, respectively), the loss in market receipts is higher than the increase in total government payments.

Conclusion

The changes in direct payments, marketing loan benefits and countercyclical payment program in the administration's 2007 farm bill proposal have a minimal impact on the Missouri representative farms. For farms raising primarily feedgrains, total government payments increase while market receipts decrease. The cotton farms total government payments are reduced, market receipts increase. However, the increase in market receipts is greater than the decrease in government payments and results in an increase in net cash farm income. The rice farms decrease in market receipts is the driving force behind their lower net cash farm income. The rice farms experience the largest decrease in net cash farm income of all the farms analyzed, but even for rice farms the decline is less than one percent.