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Potential Impacts of Eliminating Direct Payments

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Summary

Eliminating the direct payment program would have important effects on budgetary outlays, farm income, and the value of agricultural land. In contrast, estimated impacts on crop production and prices are likely to be small.

Models maintained by the Food and Agricultural Policy Research Institute at the University of Missouri (FAPRI-MU) are used to estimate possible impacts of eliminating the direct payment program effective with the 2012 crop year. Results are presented relative to a baseline prepared in early 2011 that assumes a continuation of the direct payment program and other existing farm policies.

Participants in the Average Crop Revenue Election (ACRE) program must agree to forgo 20 percent of their direct payments. If the direct payment program is eliminated, one important disincentive to ACRE program participation would be removed. The expected result is an increase in ACRE participation, but the magnitude of the increase is uncertain.

This report demonstrates the sensitivity of results to different assumptions about ACRE participation by examining two extreme cases: a scenario where ACRE participation rates are unchanged from the baseline and a scenario where all producers in the country decide to participate in ACRE once the direct payment program is eliminated. In reality, the expected outcome would be somewhere between these two extreme cases. Key results include:

- Impacts on budgetary outlays are very sensitive to ACRE participation assumptions. If there is no increase in ACRE participation, eliminating direct payments reduces projected net outlays on farm programs by $41.7 billion between fiscal years (FY) 2012 and 2021 relative to the baseline.
- In contrast, if all producers choose to participate in the ACRE program once the direct payment program is eliminated, there would be a large offsetting increase in expenditures on the ACRE program. FY 2012-2021 net outlays would decline by only $18.9 billion from baseline levels.
- The reduction in farm program payments results in lower farm income and agricultural land values. Depending on ACRE participation assumptions, net farm income declines by an average of $1.9 billion to $3.2 billion per year. Agricultural land values decline by an average of 1.8 percent to 2.7 percent relative to baseline levels.
- Crop market effects are small. Producers do not have to produce a crop to receive direct payments, so the program has smaller effects on crop production than do other programs where payments are more directly tied to production decisions.
- Effects of eliminating direct payments will differ across crops because of differences in direct payment rates, projected market prices, and expected revenue volatility.

Introduction

Concerns about the federal budget deficit have led to various proposals to reduce farm program spending. The direct payment program has received considerable attention, and some have suggested the program be significantly modified or even eliminated.

To inform the policy debate, the Food and Agricultural Policy Research Institute at the University of Missouri (FAPRI-MU) has evaluated the impacts of eliminating the direct payment program. A baseline scenario that assumes a continuation of current farm policies is compared to scenarios where the direct payment program is eliminated effective with the 2012/13 crop year. Estimated impacts on commodity markets, budgetary outlays, farm income and other indicators are summarized in this report.

Provisions of the Average Crop Revenue Election (ACRE) program complicate the analysis. ACRE participants must agree to forgo 20 percent of their direct payments. If the direct payment program is eliminated, one disincentive to ACRE participation would be removed, as participants would no longer need to forgo direct payments. The likely result is an increase in ACRE participation rates, but the magnitude of the increase is hard to predict.

To bracket possible outcomes, two extreme scenarios are examined (Table 1):

1) The "baseline ACRE participation" scenario assumes that there is no change in ACRE participation rates after the direct payment program is eliminated in 2012.
2) The "100% ACRE participation" scenario assumes all producers enroll in ACRE after the direct payment program is eliminated in 2012.

Reality is likely to be between these two extremes. While eliminating direct payments would remove one major disincentive to ACRE program participation, there will be other reasons some producers will choose not to enroll in the program. For example, ACRE participants also have to agree to forgo countercyclical payments and accept a lower loan rate, and landlords have to agree to allow renters to participate in the program. Thus, it seems likely that participation rates would increase but not reach 100% of eligible acreage.

Without other changes in law, setting direct payment rates to zero would increase potential countercyclical payments. For nonparticipants in the ACRE program, countercyclical payments are made when the season-average farm prices fall below a trigger level set equal to the target price minus the direct payment rate. If direct payments were eliminated by setting direct payment rates per unit to zero, the result would be an increase in the price that triggers countercyclical payments (Table 1). This effect could be avoided if direct payments were eliminated in a different way, such as by specifying that no acreage is eligible for the payments.

Table 1. Program assumptions, 2012-2020

Variable	Baseline	DP elimination scenarios: Baseline ACRE participation	DP elimination scenarios: 100% ACRE participation
Direct payment rates			
Corn ($/bu.)	0.28	0.00	0.00
Soybeans ($/bu.)	0.44	0.00	0.00
Wheat ($/bu.)	0.52	0.00	0.00
Upland cotton (cents/lb.)	6.67	0.00	0.00
Rice ($/cwt)	2.35	0.00	0.00
Target prices			
Corn ($/bu.)	2.63	2.63	2.63
Soybeans ($/bu.)	6.00	6.00	6.00
Wheat ($/bu.)	4.17	4.17	4.17
Upland cotton (cents/lb.)	71.25	71.25	71.25
Rice ($/cwt)	10.50	10.50	10.50
Price triggering countercyclical payments (Target price minus direct payment rate)			
Corn ($/bu.)	2.35	2.63	2.63
Soybeans ($/bu.)	5.56	6.00	6.00
Wheat ($/bu.)	3.65	4.17	4.17
Upland cotton (cents/lb.)	64.58	71.25	71.25
Rice ($/cwt)	8.15	10.50	10.50
ACRE participation rates (% of acres)			
Corn	18.1	18.1	100.0
Soybeans	17.9	17.9	100.0
Wheat	14.7	14.7	100.0
Upland cotton	0.2	0.2	100.0
Rice	0.0	0.0	100.0

Commodity market impacts

Direct payments are not tied to market prices or to current levels of crop production. Payments instead are tied to base acreage and program yields that are related to historical production levels, and per-unit payment rates that are fixed by statute. Producers can plant a wide variety of crops or nothing at all and still receive direct payments.[1] All else equal, payments that are not tied to producing a crop are likely to have smaller impacts on crop production decisions than payments that are more directly tied to current acreage and production. As a result of these program features, the direct payment program may have significant impacts on producer income and land values, but only modest impacts on commodity markets.

When ACRE participation rates are held constant, eliminating direct payments results in a very slight reduction in estimated acreage planted to program crops (Table 2). For 12 major crops, the average estimated reduction is less than half a million acres, or 0.2 percent. The resulting reduction in crop production causes a very slight increase in market prices for major crops, generally less than 0.5 percent (Table 3).

In contrast to the direct payment program, ACRE program participants can only receive ACRE payments on planted acreage. By providing some protection against downside revenue risk and making payments that are tied to planted acreage, the ACRE program may have at least some positive effect on crop acreage and production. If eliminating the direct payment program causes an increase in ACRE program participation, this could cause an increase in acreage and crop production that would offset the effect of eliminating direct payments.

Even with 100 percent participation in the ACRE program, however, the estimated change in the total area planted to major crops remains quite small. While acreage for most major crops increases slightly relative to the baseline, cotton acreage declines, as estimated cotton ACRE payments are proportionally smaller than for most other crops.[2] In response to a small increase in production, grain and oilseed prices decline marginally. Note, however, that for no major crop do average market prices change by more than 2 percent from baseline levels.

With little change in market prices for major crops, the elimination of direct payments has little effect on the livestock sector or on consumer food prices. Average consumer food expenditures, for example, change by less than 0.1 percent from the baseline (Table 4). Not only are estimated farm commodity price impacts small, but most of the consumer food dollar is explained by value that is added after commodities leave the farm.

[1] Producers do have to follow conservation rules and are restricted in their ability to plant fruits and vegetables on acreage eligible for direct payments.

[2] In addition, cotton producers are more likely to receive countercyclical payments and marketing loan benefits in the baseline than are producers of other crops. These benefits are not available if they participate in ACRE.

Table 2. Impacts of eliminating direct payments on planted area, million acres, 2012-2020 averages

Variable	Baseline	Change from baseline resulting from DP elimination			
		Baseline ACRE participation		100% ACRE participation	
		Absolute	Percentage	Absolute	Percentage
Corn	89.21	-0.02	0.0%	0.15	0.2%
Soybeans	78.20	-0.07	-0.1%	0.26	0.3%
Wheat	55.45	-0.22	-0.4%	0.33	0.6%
Upland cotton	10.82	-0.02	-0.2%	-0.22	-2.0%
Rice	3.22	0.00	0.0%	0.03	1.0%
7 other crops*	16.71	-0.11	-0.6%	-0.13	-0.8%
12-crop total	253.61	-0.43	-0.2%	0.42	0.2%

*Sorghum, barley, oats, sunflower seed, peanuts, sugar beets and sugarcane

Table 3. Impacts of eliminating direct payments on crop prices, 2012/13-2020/21 averages

Variable	Baseline	Change from baseline resulting from DP elimination			
		Baseline ACRE participation		100% ACRE participation	
		Absolute	Percentage	Absolute	Percentage
Corn ($/bu.)	4.73	0.01	0.2%	-0.04	-0.8%
Soybeans ($/bu.)	11.61	0.03	0.2%	-0.13	-1.2%
Wheat ($/bu.)	5.56	0.03	0.5%	-0.06	-1.1%
Upland cotton (cents/lb.)	74.52	0.09	0.1%	1.11	1.5%
Rice ($/cwt)	13.04	0.00	0.0%	-0.15	-1.2%

Table 4. Impacts of eliminating direct payments on consumer food expenditures, billion dollars, 2012-2020 averages

Variable	Baseline	Change from baseline resulting from DP elimination			
		Baseline ACRE participation		100% ACRE participation	
		Absolute	Percentage	Absolute	Percentage
Consumer food expenditures	1,435.41	0.11	0.0%	-0.41	0.0%

Budget impacts

Under a continuation of current law, direct payments are estimated to average $4.9 billion per year over the next decade (Table 5). Projected market prices for most commodities are high enough that outlays on the marketing loan and countercyclical payment programs are expected to be modest. Low levels of program participation limit projected outlays on the ACRE program.

If ACRE participation rates are held constant, the elimination of the direct payment program reduces average annual spending on these selected farm programs by almost $4.6 billion. Projected countercyclical payments increase by about $0.3 billion per year because of the increase in the price that triggers such payments. As noted earlier, this result occurs because it is assumed that direct payments are eliminated by setting direct payment rates to zero. If, instead, statutory payment rates were left at baseline levels and the percentage of base area eligible for direct payments were reduced to zero, then there would be no increase in countercyclical payments.

With 100 percent ACRE participation, countercyclical payments would disappear and the estimated reduction in marketing loan net outlays is also 100 percent.[3] However, ACRE program expenditures would increase sharply, by an estimated $3.7 billion per year above baseline levels. This offsets most of the budget savings associated with eliminating the direct payment program. The net effect is that farm program budget costs decline by an average of $1.5 billion per crop year from baseline levels.

Translating these crop year estimates into fiscal year estimates of Commodity Credit Corporation outlays requires a careful accounting of the fiscal years in which various payments are made (Table 6). Direct payments for the 2012/13 crop are made in fiscal year (FY) 2013, but countercyclical payments and ACRE payments for the 2012/13 crop are not made until FY 2014.

In the scenario holding ACRE participation at baseline levels, CCC net outlays in FY 2013 decline by an amount almost equal to the baseline value of direct payments. In subsequent years, the change from baseline is approximately equal to the change in direct payments and the change in countercyclical payments. Over the FY 2012-FY 2021 period, estimated CCC net outlays decline by $41.7 billion relative to the baseline.

In the scenario with 100 percent ACRE participation, the reduction in direct payments, marketing loan benefits and countercyclical payments is offset by the increase in ACRE payments. Over the FY 2012-FY 2021 period, estimated CCC net outlays decline by $18.9 billion.

[3] ACRE participants must accept a 30 percent reduction in loan rates. It is still possible that marketing loan net outlays could occur at these lower loan rates, but it is much less likely.

Table 5. Impacts of eliminating direct payments on selected government payments, million dollars, 2012/13-2020/21 crop year averages

		Change from baseline resulting from DP elimination			
		Baseline ACRE participation		100% ACRE participation	
Variable	Baseline	Absolute	Percentage	Absolute	Percentage
Direct payments	4,876	-4,876	-100.0%	-4,876	-100.0%
ACRE payments	683	-2	-0.4%	3,715	544.2%
Marketing loan benefits	186	-2	-1.3%	-186	-100.0%
Countercyclical payments	202	330	162.8%	-202	-100.0%
Sum	5,946	-4,551	-76.5%	-1,549	-26.0%

Table 6. Impacts of eliminating direct payments on Commodity Credit Corporation net outlays

Fiscal year	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021*	10-yr. total
						(billion dollars)					
Baseline	8.03	9.53	10.04	9.33	9.47	9.37	9.36	9.34	9.27	9.27	93.01
No DPs, baseline ACRE participation	8.03	4.65	5.40	4.73	4.92	4.81	4.76	4.74	4.63	4.63	51.30
Absolute change from baseline	0.00	-4.89	-4.63	-4.60	-4.55	-4.56	-4.60	-4.61	-4.64	-4.64	-41.71
Percentage change from baseline	0%	-51%	-46%	-49%	-48%	-49%	-49%	-49%	-50%	-50%	-45%
No DPs, 100% ACRE participation	7.96	4.44	7.19	7.74	8.42	7.87	7.72	7.54	7.61	7.61	74.11
Absolute change from baseline	-0.07	-5.10	-2.85	-1.58	-1.05	-1.50	-1.64	-1.80	-1.66	-1.66	-18.90
Percentage change from baseline	-1%	-53%	-28%	-17%	-11%	-16%	-18%	-19%	-18%	-18%	-20%

* The FAPRI stochastic model does not generate estimates for FY 2021. To create 10-year totals comparable to those of the Congressional Budget Office, it is assumed that outlays in FY 2021 will equal those in FY 2020.

Farm income and land value impacts

Eliminating the direct payment program reduces government payments to producers, with negative effects on farm income. With no change in ACRE participation rates, government payments decline by an average of $4.6 billion per year from baseline levels (Table 7). The slight increase in crop prices results in a very modest increase in crop receipts, but the effect is only about 0.1 percent. The estimated increase in livestock receipts is even smaller.

Eliminating direct payments has a more significant effect on production expenses than on market sales. The single largest impact is on rental payments made to nonoperator landlords. Over time, eliminating direct payments would result in lower rental rates than if direct payments continue at current levels. Overall, annual production expenses decline by an average of $1.4 billion relative to the baseline in the scenario that holds ACRE participation at baseline levels. Net farm income declines by an average of $3.2 billion, or 3.3 percent, relative to the baseline. Note that the absolute reduction in net farm income is roughly two-thirds of the reduction in government payments, with nonoperator landlords and others absorbing part of the loss.

In the scenario where ACRE participation rates are assumed to increase to 100 percent when the direct payment program is eliminated, calendar year government payments decline by an average of $2.0 billion from baseline levels.[4] The slight increase in crop production results in lower crop prices and marginally lower crop receipts. Lower crop prices also reduce feed costs, which translate into increased livestock production, lower livestock prices, and a very small reduction in average livestock receipts. Production expenses decline, but by less than in the other scenario because of the increase in production and a smaller reduction in rental rates. Net farm income declines by an average of $1.9 billion from baseline levels, almost as much as the reduction in government payments.

Lower farm income translates into a reduction in farm real estate values relative to the baseline. In the scenario with baseline ACRE participation rates, the average decline over the 2012-2020 period is $71 per acre, or 2.7 percent. With 100 percent ACRE participation, the average decline is $49 per acre, or 1.8 percent.

[4] This differs slightly from the fiscal year change in government outlays in part because of the difference between fiscal and calendar years. ACRE payments made in October 2013, for example, are recorded as part of 2013 net farm income, but are part of FY 2014 CCC outlays.

Table 7. Impacts of eliminating direct payments on farm income, billion dollars, 2012-2020 averages

		Change from baseline resulting from DP elimination			
		Baseline ACRE participation		100% ACRE participation	
Variable	Baseline	Absolute	Percentage	Absolute	Percentage
Government payments	11.12	-4.58	-41.2%	-1.98	-17.8%
Crop receipts	207.95	0.17	0.1%	-0.69	-0.3%
Livestock receipts	165.27	0.06	0.0%	-0.27	-0.2%
Production expenses	339.54	-1.43	-0.4%	-1.17	-0.3%
Other net farm income	51.95	-0.26	-0.5%	-0.15	-0.3%
Net farm income	96.74	-3.19	-3.3%	-1.93	-2.0%

Table 8. Impacts of eliminating direct payments on farm real estate values, dollars per acre, 2012-2020 averages

		Change from baseline resulting from DP elimination			
		Baseline ACRE participation		100% ACRE participation	
Variable	Baseline	Absolute	Percentage	Absolute	Percentage
Farm real estate value	2,669	-71	-2.7%	-49	-1.8%

Impacts on returns for major crops

The farm income impacts of eliminating direct payments will differ greatly across producers. Direct payments are a much larger share of income for some producers than for others, and other government payments will also differ greatly.

Over the next ten years, the projected market value of corn production is $823 per acre (Table 9). Under a continuation of current law, producers would receive about $24 per corn base acre in annual direct payments. Given projected volatility in prices and yields and an assumed 18 percent participation rate in the ACRE program, average corn ACRE payments are projected to be less than $3 per acre (about $15 for participants and $0 for nonparticipants). For a producer who happens to have exactly one corn base acre for every acre of corn planted, total receipts would be about $849 per acre.

Eliminating the direct payment program would, of course, eliminate the $24 in annual direct payments per corn base acre. If there is no change in ACRE participation rates, a slight increase in corn prices increases market receipts by less than $2 per acre, and other payments are essentially unchanged. The net reduction in producer income for someone with one acre of corn base for every acre planted is about $22 per acre.

The story is more complex when it is assumed that ACRE participation rates increase to 100 percent. In addition to eliminating direct payments, this scenario also eliminates marketing loan benefits and countercyclical payments (although these were already zero for corn in the baseline, even across 500 possible market outcomes, given projected market prices that are much higher than current target prices and loan rates). Average ACRE payments increase by $14 per acre, not because of a significant change in payment rates per acre for participating producers, but simply because five times as many acres are assumed to be participating. The slight reduction in corn market prices reduces market receipts by an average of $6 per acre. Thus, the net effect is to reduce average producer income by $16 per acre for those producers who have one acre of corn base for each acre planted.

Results differ across commodities. Direct payments are lower on a per-acre basis for soybeans than for other major crops, while projected ACRE payments are larger. For wheat, the story is fairly similar to that for corn, although per-acre receipts and payments are generally lower. For cotton and especially for rice, direct payments per base acre are much greater than for corn, soybeans and wheat. Thus the reductions in producer income are greater for producers of cotton and rice than for producers of the other crops. This result would be even more marked if one considered typical differences between planted and base acreage (base acreage for cotton, rice and wheat far exceeds planted acreage; the reverse is true for soybeans).

Table 9. Impacts of eliminating direct payments on crop returns, dollars per acre, 2012/13-2020/21 averages

Variable	Baseline	Change from baseline resulting from DP elimination			
		Baseline ACRE participation		100% ACRE participation	
		Absolute	Percentage	Absolute	Percentage
Corn					
Market receipts per acre	822.61	1.65	0.2%	-6.37	-0.8%
Marketing loan benefits per acre	0.00	0.00	-1.1%	0.00	-100.0%
ACRE payments per acre	2.68	-0.01	-0.2%	13.77	513.9%
Direct payments per base acre	23.51	-23.51	-100.0%	-23.51	-100.0%
Countercylical payments per base acre	0.00	0.03	n.a.	0.00	-100.0%
Total per acre or base acre	848.80	-21.83	-2.6%	-16.12	-1.9%
Soybeans					
Market receipts per acre	532.87	1.30	0.2%	-5.67	-1.1%
Marketing loan benefits per acre	0.11	0.00	-2.1%	-0.11	-100.0%
ACRE payments per acre	3.24	-0.01	-0.2%	17.43	537.8%
Direct payments per base acre	11.14	-11.14	-100.0%	-11.14	-100.0%
Countercylical payments per base acre	0.07	0.12	157.5%	-0.07	-100.0%
Total per acre or base acre	547.44	-9.73	-1.8%	0.43	0.1%
Wheat					
Market receipts per acre	257.61	1.31	0.5%	-2.54	-1.0%
Marketing loan benefits per acre	0.26	-0.01	-5.6%	-0.26	-100.0%
ACRE payments per acre	2.22	-0.01	-0.4%	10.26	462.5%
Direct payments per base acre	14.76	-14.76	-100.0%	-14.76	-100.0%
Countercylical payments per base acre	0.43	0.91	213.3%	-0.43	-100.0%
Total per acre or base acre	275.28	-12.56	-4.6%	-7.73	-2.8%
Upland cotton					
Market receipts per acre	744.85	1.16	0.2%	9.28	1.2%
Marketing loan benefits per acre	13.87	-0.06	-0.4%	-13.87	-100.0%
ACRE payments per acre	0.02	0.00	-0.5%	7.98	>10000%
Direct payments per base acre	33.73	-33.73	-100.0%	-33.73	-100.0%
Countercylical payments per base acre	6.67	9.12	136.9%	-6.67	-100.0%
Total per acre or base acre	799.13	-23.51	-2.9%	-37.01	-4.6%
Rice					
Market receipts per acre	983.77	0.46	0.0%	-10.69	-1.1%
Marketing loan benefits per acre	2.33	-0.02	-0.7%	-2.33	-100.0%
ACRE payments per acre	0.00	0.00	n.a.	30.86	>10000%
Direct payments per base acre	96.24	-96.24	-100.0%	-96.24	-100.0%
Countercylical payments per base acre	2.55	14.03	550.5%	-2.55	-100.0%
Total per acre or base acre	1084.89	-81.77	-7.5%	-80.95	-7.5%

WTO considerations

The United States has agreed to limit certain types of agricultural support programs as part of existing World Trade Organization (WTO) commitments. Currently stalled Doha Round negotiations proposed tighter restrictions.

In its annual WTO notifications, the United States has reported the support provided under the direct payment program as a "green box" subsidy which is not subject to limitations, although other countries have challenged this classification. Marketing loan benefits, countercyclical payments and ACRE payments are all "amber box" subsidies that can be subject to limitation.[5]

If eliminating the direct payment program results in an increase in ACRE program expenditures, the net effect would be to reduce U.S. green box subsidies and increase amber box subsidies. It is unlikely that amber box subsidies would exceed current U.S. commitments, but if a new WTO agreement resulted in lower levels of permitted support, it could be an issue.

Concluding comment

Eliminating the direct payment program would likely have larger impacts on budgetary outlays, farm income and land values than on commodity markets and consumer food prices. The study points out one major source of uncertainty in estimating impacts: the effect that eliminating direct payments would have on participation in the ACRE program.

There are, of course, many other sources of uncertainty in estimating potential impacts of eliminating the direct payment program. For example, it is not possible to fully anticipate just how agricultural producers, landowners and lenders would choose to respond to a $4.9 billion reduction in fixed annual payments.

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[5] Countercyclical payments have been reported as "nonproduct specific amber box support." This means that these payments will not always be included in the "total current aggregate measure of support" that is used to measure compliance with WTO commitments. Only if the sum of all nonproduct specific support exceeds a threshold level is it counted toward the aggregate measure.