

ANALYSIS OF LOAN OUTLAYS FOR THE 1999 CROP
UNDER ALTERNATIVE LOAN RATE FORMULAS

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At the request of Senator Blanche Lincoln (D, AR), the Food and Agricultural Policy Research Institute (FAPRI), located at the University of Missouri and Iowa State University, has analyzed potential government costs associated with marketing loans for the 1999 crop. The analysis covers expected outlays under the announced loan rates for 1999, as well as estimating the costs associated with higher loan rates. The higher rates are determined using increasing percentages of the five-year moving average of prices.

Scenario Assumptions

- The analysis covers outlays for the 8 major crops – wheat, corn, grain sorghum, barley, oats, soybeans, cotton, and rice – for the 1999 crop. Potential outlays for minor oilseeds are not included.
- Under the alternative scenarios, loan rates are calculated as a percentage of the 5-year moving average of prices, excluding the high and low prices. The percentages range from 80% up to 100%, and are computed in increments of 5%. Table 1 gives the calculated loan rates and historical data used in the formulas. These rates are compared back to the actual rates announced by USDA.
- Marketing loan outlays are dependent on the production and price assumptions for the major crops. For this analysis, assumptions for production levels and price are given in Table 2. Production levels are taken from USDA's July, 1999 Supply & Demand estimates. Price estimates for feed grains and rice are also based on USDA's latest estimates. Estimates for wheat, soybeans, and cotton are FAPRI estimates based on the latest market conditions. Market price estimates do not vary across the loan rate scenarios.
- The current payment limitation for total loan deficiency payments (LDP's) and marketing loan gains is \$75,000 per "person". Under current loan rates and price projections, this will be a binding constraint for some producers and could marginally reduce outlays. As loan rates increase, the constraint will become a more significant constraint for a larger number of producers. This analysis does not consider any reduction in LDP's and marketing loan gains that could result from existing payment limitations.

Major Results

- Outlays under each of the scenarios are presented in Table 3. The outlays are given for each crop and the total for the 8 crops.
- Under current loan rates, price projections indicate there will be outlays associated with each of the 8 crops. Total outlays are projected at \$6.8 billion for the 1999 crop. These consist of \$5.8 billion in LDP's and \$1.0 billion in marketing loan gains. Soybeans account for the single largest crop with costs of \$2.8 billion, or 41% of the total.
- Assuming loan rates at 80% of the 5-year average, costs rise to \$8.4 billion, an increase of \$1.6 billion above outlays at current loan rates.

- Loan outlays increase by approximately \$3 billion for each 5% increment in the loan rate formula. Using 85% of the 5-year average, loan outlays total \$11.4 billion for the 8 crops.
- Moving up to 100% of the 5-year average price would lead to substantially higher loan rates than under current law. For example, cotton would rise from \$0.519 per pound up to \$0.717 per pound, an increase of 38%. The wheat loan rate would rise to \$3.71 per bushel, an increase of 44% above the current rate of \$2.58. Soybeans show the smallest increase, with the loan rate rising by \$0.96 per bushel, or 18%.
- Assuming loan rates at 100% of the 5-year moving average results in total outlays of \$20.5 billion.

Summary

The issue of payment limitations could prove to be critical for the 1999 crop, particularly under scenarios with higher loan rates where the limitations would be binding for a larger number of producers. If a producer has reached the \$75,000 limit on LDP's and marketing loan gains, the most likely option would be for that producer to place the remaining bushels under loan. If prices have not recovered above loan levels by the end of the 9-month loan period, the producer would forfeit the commodity to the government to avoid a marketing loan gain. Placing the commodity under loan and forfeiting as loan settlement does not count toward the payment limitation. In this case, the Commodity Credit Corporation (CCC) of USDA would have ownership of the commodity, and then must decide whether to retain, sell, or donate the commodity.

If a sufficient number of producers choose to place their crop under loan as opposed to claiming the LDP and marketing the grain, this could provide some price support in the early months of the marketing year. However, assuming that grain returns to the market at the end of the loan, additional pressures will be brought to bear on the market.

This analysis assumes that any changes in the loan rate would apply to only the 1999 crop. If higher loan rates were extended to the 2000 crop, there would be impacts on the acreage decisions of producers. Depending on the relative loan rates, there could be shifts among crops, as well as an increase in the total acreage level if rates were set high enough.

Table 1. Loan Rate Calculations Under Alternative Formulas

	93/94	94/95	95/96	96/97	97/98	98/99	5-Yr Avg
Farm Prices							
Wheat	3.26	3.45	4.55	4.30	3.38	2.65	
Corn	2.50	2.26	3.24	2.71	2.43	1.95	
Soybeans	6.40	5.48	6.72	7.35	6.47	5.00	
Rice	7.98	6.78	9.15	9.96	9.70	8.75	
Cotton	0.5810	0.7200	0.7690	0.6930	0.6520	0.6110	
Prices Determining Loan Rates *							
Wheat		3.45	4.55	4.30	3.38	2.65	
Corn		2.26	3.24	2.71	2.43	1.95	
Soybeans		5.48	6.72	7.35	6.47	5.00	
Rice		6.78	9.15	9.96	9.70	8.75	
Cotton	0.6346	0.7961	0.8169	0.7035	0.6501		
5-Year Olympic Averages **							
Wheat							3.71
Corn							2.47
Soybeans							6.22
Rice							9.20
Cotton							0.7166
1999 Crop Loan Rates							
		Actual	80% of	85% of	90% of	95% of	100% of
		Loan Rates	5-Yr Avg.	5-Yr Avg.	5-Yr Avg.	5-Yr Avg.	5-Yr Avg.
Wheat		2.58	2.97	3.15	3.34	3.52	3.71
Corn		1.89	1.97	2.10	2.22	2.34	2.47
Sorghum		1.74	1.82	1.93	2.04	2.16	2.27
Barley		1.59	1.66	1.76	1.87	1.97	2.08
Oats		1.13	1.18	1.25	1.33	1.40	1.47
Soybeans		5.26	4.98	5.29	5.60	5.91	6.22
Rice		6.50	7.36	7.82	8.28	8.74	9.20
Cotton		0.5192	0.5733	0.6091	0.6449	0.6807	0.7166

* Cotton uses a market price for determining loan rates. Other crops use season-average farm prices.

** To calculate average, 1994-98 prices are used for food grains, feed grains, and oilseeds. Cotton uses the 1993-97 period.

Table 2. Production and Price Assumptions for the 1999 Crop***

	Wheat	Corn	Sorghum	Barley	Oats	Soybeans	Cotton	Rice
Production	2,333	9,650	573	295	161	2,935	18.20	211
Farm Price	2.50	1.85	1.55	1.80	1.10	4.50	0.505	6.00

*** Production as estimated in USDA's July, 1999 World Agricultural Supply and Demand Estimates.

Prices for feed grains and rice are based on midpoints of WASDE estimates. Wheat, soybeans, and cotton represent FAPRI estimates.

Table 3. Loan Outlays Associated With the 1999 Crop Under Alternative Loan Rates

	Actual Loan Rates	80% of 5-Yr Avg.	85% of 5-Yr Avg.	90% of 5-Yr Avg.	95% of 5-Yr Avg.	100% of 5-Yr Avg.
Wheat						
Loan Rate (\$/Bu)	2.58	2.97	3.15	3.34	3.52	3.71
Average LDP Rate (\$/Bu)	0.33	0.72	0.90	1.09	1.27	1.46
LDP's (Million \$)	650	1,359	1,669	1,958	2,221	2,453
Marketing Loan Gains (Million \$)	42	199	313	448	609	800
Outlays (Million \$)	692	1,558	1,982	2,406	2,830	3,253
Corn						
Loan Rate (\$/Bu)	1.89	1.97	2.10	2.22	2.34	2.47
Average LDP Rate (\$/Bu)	0.18	0.26	0.39	0.51	0.63	0.76
LDP's (Million \$)	1,424	2,062	2,971	3,830	4,629	5,352
Marketing Loan Gains (Million \$)	181	336	601	915	1,288	1,737
Outlays (Million \$)	1,605	2,398	3,572	4,745	5,917	7,089
Sorghum						
Loan Rate (\$/Bu)	1.74	1.82	1.93	2.04	2.16	2.27
Average LDP Rate (\$/Bu)	0.31	0.38	0.50	0.61	0.72	0.84
LDP's (Million \$)	166	206	266	324	381	437
Marketing Loan Gains (Million \$)	4	6	11	17	24	33
Outlays (Million \$)	169	213	277	341	406	470
Barley						
Loan Rate (\$/Bu)	1.59	1.66	1.76	1.87	1.97	2.08
Average LDP Rate (\$/Bu)	0.24	0.31	0.41	0.52	0.62	0.73
LDP's (Million \$)	62	80	105	130	153	176
Marketing Loan Gains (Million \$)	3	5	9	13	19	25
Outlays (Million \$)	65	85	114	143	172	201
Oats						
Loan Rate (\$/Bu)	1.13	1.18	1.25	1.33	1.40	1.47
Average LDP Rate (\$/Bu)	0.14	0.19	0.26	0.34	0.41	0.48
LDP's (Million \$)	22	29	40	51	61	71
Marketing Loan Gains (Million \$)	1	1	2	3	4	7
Outlays (Million \$)	22	30	42	54	65	77
Soybeans						
Loan Rate (\$/Bu)	5.26	4.98	5.29	5.60	5.91	6.22
Average LDP Rate (\$/Bu)	0.99	0.70	1.01	1.33	1.64	1.95
LDP's (Million \$)	2,412	1,749	2,481	3,184	3,854	4,488
Marketing Loan Gains (Million \$)	416	261	434	637	873	1,147
Outlays (Million \$)	2,828	2,009	2,915	3,821	4,728	5,635
Upland Cotton						
Loan Rate (\$/Lb)	0.519	0.573	0.609	0.645	0.681	0.717
Average LDP Rate (\$/Lb)	0.130	0.184	0.220	0.255	0.291	0.327
LDP's (Million \$)	891	1,235	1,454	1,664	1,866	2,059
Marketing Loan Gains (Million \$)	232	356	448	548	657	775
Outlays (Million \$)	1,123	1,591	1,902	2,213	2,523	2,834
Rice						
Loan Rate (\$/Cwt)	6.50	7.36	7.82	8.28	8.74	9.20
Average LDP Rate (\$/Cwt)	1.59	2.45	2.91	3.37	3.83	4.29
LDP's (Million \$)	180	259	295	326	353	374
Marketing Loan Gains (Million \$)	151	251	311	375	445	520
Outlays (Million \$)	331	510	606	702	798	893
8-Crop Total						
LDP's (Million \$)	5,807	6,979	9,282	11,467	13,518	15,408
Marketing Loan Gains (Million \$)	1,030	1,415	2,128	2,957	3,921	5,044
Outlays (Million \$)	6,837	8,394	11,410	14,425	17,439	20,452