

**The Farm Level Impacts of the 1999
Farm Relief Package**

AFPC Working Paper 99-8

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The Farm Level Impacts of the 1999 Farm Relief Package

On October 22, 1999 President Clinton signed the emergency assistance package that provided \$8.7 billion for agricultural relief following the 1999 growing season. The package included \$5.5 billion in direct payments to farmers via the equivalent of an additional AMTA payment (termed the PFC). Additional monies were available for oilseed producers, livestock and dairy, crop insurance subsidies, and drought relief.

The payments were made to provide aid to producers hit by low crop prices brought on in part by the loss of export markets. Low prices have created a cash flow problem for many crop producers across the country.

This working paper analyzes the impact of the Farm Relief package on the liquidity position of AFPC's representative crop farms. The AFPC maintains 41 representative crop farms in the major crop growing areas of the U.S. (Figure 1). For those interested in how the farms are developed, refer to WP 99-1. A brief description of the farms are included in the Appendix. This report focuses on the probability of a cash flow deficit. The probability of cash flow deficit is the number of times out of 100 that the farm's annual net cash farm income does not exceed cash requirements for family living, principal payments, taxes (income and self-employment), and actual machinery replacement expenses (not depreciation).

Feedgrain Farm Results

The AFPC maintains 13 representative feedgrain farms across the U.S. Although the farms produce other crops, feedgrains represent the majority of sales for these farms when first established.

The feedgrain farms were projected to have a 55 percent chance of a cash flow deficit, in 1999 prior to the payments provided under the emergency aid package (Table 1). The projected

cash flow deficit probability in 1999 ranged from a high of 94 percent for the 800 acre Nebraska farm (NEG800) to a low of 28 percent on the 3500 acre South Carolina farm (SCG3500).

AFPC uses a rule of thumb that farms with greater than 20 percent probability of a cash flow deficit are in cautionary to serious financial position. All 13 of these farms qualify as exhibiting financial concerns under that rule.

The probability of cash flow deficit increases by 2002 for each of the feedgrain farms with the exception of the two Iowa farms. The moderate and large Iowa farms reduce the chances of a cash deficit by 2 and 9 percentage points, respectively. On average, however, the feedgrain farms probability of a cash flow deficit increase from 55 percent in 1999 to 62 percent by 2002.

The emergency aid package significantly reduces the feedgrain farms's cash flow deficit probabilities in 1999 by 11 percentage points. The moderate Texas Northern Plains farm (TXNP1600) experiences a 20 percentage point reduction in the probability of a cash flow deficits due to the aid package. The moderate size Iowa farm (IAG950) experiences a 10 percentage point decline. The moderate scale Nebraska operation (NEG800) adverse financial position is such that even the emergency package does not reduce its chance of experiencing a cash flow deficit.

The long-term favorable impact of the assistance package is not substantial. By 2002, there is only a one percentage point difference between the probability of a cash flow deficit for the baseline and the emergency aid package. This means that while the emergency aid package does help the representative farms in cash flowing the 1999 crop, the farms are in just as serious a financial condition by 2002 as before the emergency act was passed. This indicates that without significant increases in commodity prices in the near future additional government assistance will likely be necessary annually if the liquidity position facing the nations feedgrain operations is to be addressed.

Cotton

Under the baseline the 9 representative cotton farms average a 59 percent probability of a cash flow deficit for 1999. The farms range from a low of 6 percent for the large Texas Southern Plains farm (TXSP3697) to a high of 98 percent for the Texas Coastal Bend (TXCB1700). Eight of the 9 farms are experiencing severe financial stress. (Probabilities of a cash flow deficit average 59 percent in 1999.) By 2002 all 9 of the farms are under severe stress with the probability of a cash flow deficit averaging 66 percent.

The emergency aid package reduces the average probability of a cash flow deficit across the cotton farms by 14 percentage points, from 59 to 45 percent. The reduction per farm ranged from 23 percentage points for the moderate size California farm (CAC2000) to 5 percentage points for the large Texas Southern Plains (TXSP3697) farm. The TXSP3697 farm is not as prosperous relative to the other farms as this data suggests. The TXSP3697 farm received substantial disaster payments in 1999 because of prior losses that were remedied in the 1998 emergency assistance package passed by Congress. This influx of cash substantially reduced the probability of a cash flow deficit for the farm in 1999.

By 2002, after the emergency payments in 1999, the probability of a cash flow deficit has increased to 62 percent from 45 percent in 1999. That is only 4 percentage points below the probability of cash flow deficits before the aid payments in 1999. As the case for feedgrains, unless there is significant recovery in cotton prices, cotton farms will continue to be under significant liquidity pressure.

Wheat

Without the emergency aid payments in 1999, 9 of the 10 representative wheat farms have cash flow deficit probabilities in excess of 46 percent. The 1999 aid payments reduced the

average probability of a cash flow deficit on the wheat farms by 17 percentage points from 58 percent to 41 percent. Individual farms experience reductions in cash flow deficit probability from 5 (KSNW2325) to 32 percentage points (KSSW1385).

By 2002 there is practically no difference in the probability of a cash flow deficit resulting from the 1999 emergency assistance. Only two of the farms, the large Washington (WAW4250) and the large Northwest Kansas (KSNW4300) have any reduced cash flow deficit probability by 2002 after the payments. As with the feedgrain and cotton farms, this indicates that government will again be asked to address the cash flow crisis facing much of agriculture.

Rice

All nine rice farms have a cash flow deficit probability greater than 39 percent in 1999 under the baseline with the average being 80 percent. The emergency package moves three of the farms out of the cash flow caution zone in 1999 and reduces the average probability across the farms from 80 to 42 percent. Probabilities of cash flow deficit are reduced from 58 to 63 percentage points on the California and Texas rice farms.

By 2002, the rice farms have a 58 percent probability of a cash flow deficit. After the emergency payments the 2002 cash flow deficit probability drops 4 percentage points to 54 percent. Like the feedgrain, cotton, and wheat farms, this result indicates that farms will continue to be under financial pressure without significant improvement in crop prices or additional government assistance.

Summary

Prior to the 1999 aid package 39 of 41 representative crop farms were under cautionary to serious financial stress as exhibited by probabilities of cash flow deficits in excess of 20 percent. After government payments were made all sectors experienced a significant reduction in their

probability of a cash flow deficit. The number of farms experiencing greater than a 1 in 5 chance of a deficit was only slightly lower at 35. However, by 2002, before and after aid payments were made, 37 out of 41 farms remain in financial trouble. The direct implication is that continued government aid will be necessary unless there is a significant increase in crop prices. Unless there is a crop disaster in a major producing county there appears to be no significant increase in crop prices in the foreseeable future.

Table 1. Probabilities of Cash Flow Deficits on Representative Farms With and Without the Farm Relief Package.

	1999		2002	
	Base	With Emergency Payments	Base	With Emergency Payments
Feedgrains				
TXNP1600	51	31	59	58
TXNP5500	33	25	39	38
LAG950	54	44	52	50
LAG2400	53	44	44	42
MOCG3300	45	28	49	49
MOCG1700	36	20	45	46
MONG1200	91	87	99	99
NEG800	94	94	98	97
NEG1575	72	57	81	80
SCG1500	48	38	63	60
SCG3500	28	16	29	25
TNG900	66	61	88	86
TNG2400	41	31	58	58
Average 13 farms	55	44	62	61
Cotton				
CAC2000	58	35	58	57
CAC6000	39	27	51	49
TXSP3697	6	1	25	22
TXSP1682	60	39	55	45
TXRP2500	86	77	93	86
TXBL1400	40	23	34	30
TXCB1700	98	92	99	97
TNC1675	70	52	97	94
TNC3800	78	63	85	79
Average 9 farms	59	45	66	62
Wheat				
WAW1500	79	66	65	65
WAW4250	63	53	50	49
NDW4850	56	40	36	36
NDW1760	50	29	34	34
COW2700	54	30	23	23
COW5420	46	30	27	27
KSNW4300	74	55	57	55
KSNW2325	84	79	73	73
KSSW1385	58	26	53	53
KSSW3180	19	5	11	11
Average 10 farms	58	41	43	43
Rice				
CAR424	98	40	88	77
CAR1365	96	33	60	46
TXR2118	75	16	19	17
TXR3750	84	23	53	47
MOR1900	99	93	99	99
MOR4000	88	73	95	89
ARR2645	40	12	10	10
ARR3400	39	8	2	2
LAR1100	97	78	99	99
Average 9 farms	80	42	58	54

A policy working paper is designed to provide economic research on a timely basis. It is an interim product of a larger AFPC research project which will eventually be published as a policy research report. These results are published at this time because they are believed to contain relevant information to the resolution of current policy issues. AFPC welcomes comments and discussions of these results and their implications. Address such comments to the author(s) at:

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