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Economic Research Service

Agriculture Information Bulletin Number 713

Financial and Structural Characteristics of CRP Enrollees, 1991

Charles Dodson
Bob McElroy

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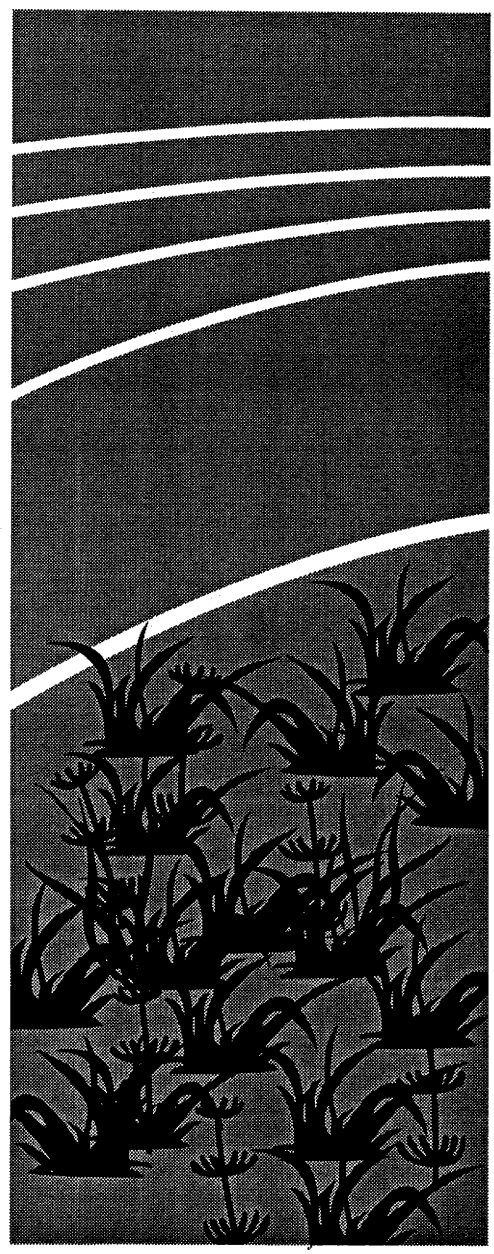

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Financial and Structural Characteristics of CRP Enrollees, 1991. By Charles Dodson and Bob McElroy. Rural Economy Division, U.S. Department of Agriculture, Economic Research Service. Agriculture Information Bulletin No. 713.

Abstract

Farms with CRP enrollment, about 9 percent of all farms, were indicated to be more profitable, more efficient in terms of cost, and larger in terms of annual sales and acres operated than non-CRP enrollees. Almost one-third of CRP payments made to farm businesses went to farms reporting no production (whole-farm enrollees). Whole-farm enrollees represented about one-third of all CRP enrollees. Operators of these farms were older than average, supplied little operator labor, did not consider farming as their primary occupation, and received most of their household income from off-farm sources. Also, these operators had little investment in equipment or livestock and relied on the CRP for a large share of their gross cash farm income. In contrast, farm operators reporting production (part-farm enrollees) were more likely to consider farming as their primary occupation, and received most of their household income from farming. Impacts on farm-level income of the elimination of CRP depend largely on the ability of the operator to generate income from these acres. Whole-farm enrollees were more sensitive to program changes.

Keywords: Conservation Reserve Program, farm financial characteristics, Farm Costs and Returns Survey

Acknowledgments

Appreciation is expressed to Ken Mathews and Tim Osborn of USDA's Economic Research Service for their comments and suggestions. Appreciation is also expressed to Dr. Terry Ervin, Associate Professor of Agricultural Economics at Texas Tech University for his input.

Washington, DC 20005-4788 May 1995

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Summary

The average Federal payment per farm enrolled in the Conservation Reserve Program (CRP) is nearly $7,000, 10 percent of their average gross farm cash income. With most CRP contracts due to expire over the next 3 years, this report assesses the program's effects over the past decade and identifies the types of farms likely to be the most affected by program changes.

Since the CRP's inception in 1986, 36 million acres have been enrolled. It was designed to both protect highly erodible or environmentally sensitive cropland by taking it out of farm production and assist farmers financially by paying them for each acre they enroll in the program. Farmers have also benefited from higher crop prices that have resulted from cropland being idled under the CRP.

About 9 percent of U.S. farmers have land enrolled in the CRP. A third of those farmers have enrolled a majority of their total farm acreage in the program (8.6 million acres). They averaged $6,100 per year in program payments, which amounted to 82 percent of their gross cash farm income. Payments to these farmers account for just under a third of total program payments.

Policymakers will use information on the financial and structural characteristics of farm operations that either received CRP payments or reported CRP acres in 1991 (*CRP enrollees*) to consider how changes to the current program may affect the financial well-being of these operators.[1]

Operators who enroll a majority of their acreage in the CRP (*whole-farm enrollees*) will be most affected by program changes. These farmers are generally older than the average farmer, supplied little operator labor, did not consider farming as their primary occupation, and received 90 percent of their household income from off-farm sources. These enrollees would likely have to spend more time working on their farms and/or acquire additional equipment in order to return land to production. If whole-farm enrollees received cash rent instead of CRP payments, 60 percent would have still had negative farm incomes in 1991.

Two-thirds of CRP participants enrolled only part of their farm in the program (*part-farm enrollees*). These farmers were more likely to consider farming as their primary occupation and received most of their household income from farming. Among these farmers, the average CRP payment was $7,414 per year. Farmers in this group who were more reliant on the CRP raised livestock and were concentrated in the Northern Plains region. The elimination of the CRP will affect the farm-level income of part-farm enrollees differently, depending on the operator's ability to generate income from previously enrolled acres.

The United States experienced a 22-percent reduction in cropland erosion compared with conditions prior to the CRP and conservation compliance. Farmers who sign up for the program must idle their land for 10 years. Farmers holding CRP contracts currently receive $1.8 billion annually in rental payments for converting eligible cropland into conservation uses. This translates into $50 per acre of enrolled cropland.

[1]Terms in italics are defined in the Glossary.

Glossary

Animal units are used to measure stocking rates and represent the equivalent of a mature dairy cow.

CRP enrollees were defined as farm operations that either received CRP payments or reported CRP acres in 1991.

Commercial-sized farms reported $50,000 or more in annual sales.

Favorable farms are farms with debt-to-asset ratios less than or equal to 0.40 and positive net farm income.

Household income is equal to farm income going to the household plus off-farm income. Included in farm income is self-employment income plus amounts that operators pay themselves and family members to work on the farm, income from renting out acreage, and net income from a farm business other than the one being surveyed. Off-farm income includes non-farm wages and salaries plus interest and dividends plus non-farm business income.

Nonenrollees were defined as all farms which reported neither CRP payments nor CRP acres.

Part-farm enrollees were farm operators with less than a majority of their acres enrolled in the CRP and reported farm production in 1991.

Vulnerable farms are farms with debt-to-asset ratios greater than 0.40 and negative net farm income.

Whole-farm enrollees were farm operators with a majority of their acres enrolled in the CRP and reporting no farm production in 1991. However, these operators may maintain a limited farming operation on acres not enrolled in the CRP.

Financial and Structural Characteristics of CRP Enrollees, 1991

Charles Dodson
Bob McElroy

Introduction

In 1991, 9 percent of all U.S. farms were enrolled in the Conservation Reserve Program (CRP). Compared with farms not enrolled, CRP farms were larger, more efficient and profitable, and tended to own rather than lease land. Whole-farm enrollees are likely to experience the greatest farm-level impacts if the CRP is eliminated. Part-farm enrollees will likely be affected differently, depending on the operator's ability to generate income from previously enrolled acres.

Enrollees Versus Nonenrollees

The CRP has strongly influenced U.S. production agriculture. About 186,000 farms were enrolled in the program in 1991, representing about 9 percent of all farms. These farms controlled 12 percent of U.S. farm assets, owed 10 percent of farm operator debt, and represented 8 percent of the total value of U.S. farm production. Compared with nonenrollees, farms with CRP enrollment were larger, tended to own rather than lease land, and carried greater levels of farm debt. Also, CRP enrollees were more efficient in terms of cost and more profitable than nonenrollees.

Thirty-two percent of CRP enrollees operated *commercial-sized* farms compared with 27 percent for nonenrollees. CRP enrollees were slightly older than nonenrollees and more dependent on farm income. The average age of CRP enrollees was 56 compared with 53 for nonenrollees (table 1). On average, enrollees received about 30 percent of their total *household income* from the farm compared with only 14 percent for nonenrollees.

Average U.S. net cash and net farm income per farm for enrollees exceeded that of nonenrollees by $5,300 and $3,500, respectively (table 2). Greater returns on assets and a higher percentage of farms reporting positive net cash and net farm income reflected the higher profitability for farms with CRP acres (table 3). CRP enrollees operated more acres and had more total assets than nonenrollees. Farms enrolled in the CRP operated 822 acres per farm versus 596 for nonenrollees (table 1). CRP enrollees owned about 64 percent of their acreage compared with 37 percent for nonenrollees.

Farm businesses that were enrolled in the CRP in 1991 owned more total assets than nonenrolled farm businesses—$420,032 compared with $379,358 (table 4). The average debt-asset ratio for enrollees was 0.15 compared with 0.11 for nonenrollees.

About the FCRS

The Farm Costs and Returns Survey (FCRS) is a multiple frame survey that provides annual estimates of farm expenses and income for a calendar year. The survey has been conducted since 1984, with 1993 being the most recent available data. The 1991 survey was used since it included more complete information concerning CRP enrollees. Each farm surveyed represents a number of similar farms. In 1991, 1,059 surveyed farms reported either receiving CRP payments or owning CRP acres. These farms represented 185,892 farms and accounted for about 80 percent of all CRP payments and CRP acres. Most of the undercoverage can probably be explained by nonoperator landlords, who are not covered by the FCRS. Also, the number of farms is less than the 350,000 contracts as reported by the Agricultural Stabilization and Conservation Service (now part of the USDA Consolidated Farm Service Agency). In addition to undercoverage of non-operator landlords, multiple CRP contracts per farm can explain this discrepancy. More detailed information concerning the FCRS can be found in Morehart, Johnson, and Banker.

Table 1—Selected structural characteristics of CRP enrollees, by production region[1,2]

Structural characteristics	Northwest	Northern Plains	Southern Plains	Western Corn Belt/ Lake States	Eastern Corn Belt/ Lake States	South	All enrollees	Non-enrollees	All farms
				Number					
Farms	8,407	44,314	11,726	61,407	23,048	30,524	185,852	1,914,048	2,099,900
				Percent of U.S.					
Farm operator debt	2	4	1	3	1	1	12	88	100
Farm assets	1	3	1	3	1	1	10	90	100
CRP payments	12	29	12	31	6	8	100	0	100
				Acres/farm					
Land use:									
Acres owned	1,328	792	917	301	191	333	520	219	246
Acres operated[3]	3,270	1,326	1,794	371	276	380	822	596	616
CRP acres	467	215	368	112	52	75	155	0	14
Diversion acres	107	41	69	8	8	11	25	9	10
Hay acres	50	62	23	16	12	15	41	30	30
Pasture/range	749	470	933	29	15	32	178	178	178
Cropland acres	559	362	333	130	132	72	206	114	122
				Percent of farms					
CRP dependent[4]	36	35	48	55	60	58	50	--	4
Total assets:									
>$750,000	37	15	23	12	9	11	14	11	11
<$250,000	23	46	45	56	60	55	50	59	58
Annual sales:									
<$50,000	43	51	54	72	81	85	68	73	73
$50,000-99,999	33	22	19	11	8	7	14	12	12
$100,000-249,999	18	18	20	14	7	4	13	10	10
>$250,000	6	9	6	3	4	4	5	5	5
Operator characteristics:									
<40 years old	16	18	15	21	13	10	17	20	20
>60 years old	50	40	53	52	43	46	47	44	44
Farming primary occupation	89	80	77	46	43	46	58	56	56
				Years					
Average operator age	56	54	56	54	58	59	56	53	53
				Hours					
Annual operator labor	2,031	1,887	1,695	1,013	1,006	831	1,285	1,529	1,508
				Percent of farms in region					
Farm specialization:[5]									
Small grain[6]	63	20	2	--	--	2	8	3	3
Feed grain[7]	--	12	7	23	22	6	15	13	13
Cotton	--	--	22	--	--	2	2	1	1
Red meat animals[8]	26	42	43	27	14	26	28	50	46
Dairy	1	2	3	4	6	2	4	5	5
Whole-farm CRP	2	10	12	27	23	22	18	--	3

-- = Not applicable.

[1]See figure 1 for regions. [2]Regions do not include all States that received CRP payments. [3]Includes Federal grazing land in the Western States and, therefore, differs from National Agricultural Statistics Service's official estimate of acres per farm. [4]More than one-third of gross cash farm income in the form of CRP payments. [5]Fifty percent or more of the value of farm production was from a specific commodity or related group of commodities. [6]Barley, oats, and wheat. [7]Corn, sorghum, and soybeans. [8]Beef, hogs, and sheep.

Source: Farm Costs and Returns Survey, 1991.

Table 2—Income statement for CRP enrollees and nonenrollees, by CRP production region

Item	Northwest	Northern Plains	Southern Plains	Western Corn Belt/ Lake States	Eastern Corn Belt/ Lake States	South	All farms
				Dollars/farm			
CRP enrollees:							
Gross cash income:	107,033	107,329	100,999	53,631	44,807	35,463	68,586
Crop sales + CCC	46,237	29,540	19,717	21,675	26,921	18,217	25,117
Livestock sales	14,987	55,029	34,020	19,444	9,147	9,383	25,684
Deficiency and disaster	19,966	7,737	7,927	2,589	2,340	1,403	4,735
CRP payments	17,841	8,526	12,884	6,418	3,078	3,380	6,938
Recreation income	23	8	204	3	1	51	25
Other farm-related income	7,962	6,488	25,970	3,564	3,210	3,062	6,083
Less: Cash expenses:	79,008	84,665	84,177	38,001	34,748	28,764	52,834
Total variable expenses:	48,075	64,913	62,226	26,101	24,241	21,874	38,541
Farm origin	5,997	34,000	23,014	9,842	5,268	5,481	14,990
Manufactured inputs	21,052	13,860	16,484	8,444	10,826	8,248	11,238
Labor	5,541	3,065	7,236	1,514	2,548	3,234	3,271
Other variable expenses	15,485	13,988	15,492	6,301	5,600	4,911	9,043
Fixed cash expenses	30,934	19,752	21,951	11,900	10,507	6,890	14,293
Equals: Net cash farm income	28,025	22,664	16,823	15,631	10,059	6,699	15,753
Plus: Net noncash items:	3,698	4,707	3,346	-255	-42	2,496	450
Depreciation expense	8,807	8,017	6,608	4,899	4,119	4,001	5,737
Net inventory increase	9,232	771	8,199	844	-171	2,742	1,867
Other noncash income	3,273	2,538	1,756	3,800	4,247	3,756	3,421
Equals: Net farm income	31,723	17,957	20,169	15,376	10,017	9,195	15,303
Non-CRP enrollees:							
Gross cash income:	68,264	81,820	38,030	70,601	61,465	35,797	61,618
Crop sales + CCC	33,328	25,929	9,836	24,182	33,218	20,738	27,963
Livestock sales	24,610	44,398	21,093	39,352	21,552	11,245	26,236
Deficiency and disaster	2,569	5,343	2,096	2,513	2,488	1,046	2,165
Recreation income	11	66	143	1	1	25	39
Other farm-related income	7,743	6,045	4,830	4,535	4,211	2,741	5,204
Less: Cash expenses:	57,054	66,590	34,174	55,478	50,325	29,531	51,128
Total variable expenses:	44,401	50,959	27,226	41,768	37,944	23,552	39,970
Farm origin	10,559	23,257	10,685	17,094	12,065	5,710	12,618
Manufactured inputs	11,271	12,649	6,877	11,264	13,545	7,937	11,283
Labor	10,549	2,900	3,347	3,489	4,052	4,515	6,793
Other variable expenses	12,022	12,153	6,316	9,921	8,281	5,389	9,276
Fixed cash expenses	12,652	15,631	6,948	13,710	12,382	5,980	11,158
Equals: Net cash farm income:	11,210	15,230	3,856	15,123	11,140	6,265	10,490
Plus: Noncash items	806	-758	3,059	-1,916	1,364	3,864	1,285
Depreciation expense	5,791	6,959	3,266	6,912	5,958	3,000	5,406
Net inventory increase	1,870	3,138	3,124	1,692	2,647	2,960	2,626
Other noncash income	4,727	3,063	3,202	3,394	4,674	3,905	4,064
Equals: Net farm income	12,016	14,472	6,915	13,297	12,504	10,129	11,775

Source: Farm Costs and Returns Survey, 1991.

Table 3—Selected financial performance statistics for CRP enrollees versus nonenrollees, by CRP production region

Item	Northwest	Northern Plains	Southern Plains	Western Corn Belt/ Lake States	Eastern Corn Belt/ Lake States	South	All farms
				Percent			
CRP enrollees:							
Profitability:							
Average return on assets	3.6	1.7	3.2	2.9	1.1	1.5	2.1
Share of farms with positive:							
Net cash income	83	74	77	78	59	71	72
Net farm income	84	74	78	89	87	80	81
Solvency:							
Debt-asset	24	20	20	15	12	7	15
Favorable/total	55	61	66	82	81	78	73
Vulnerable/total	3	14	10	3	2	2	6
Efficiency:							
Operating expense	74	78	85	71	78	79	77
				Years			
Asset turnover	6.2	4.2	4.1	5.9	7.1	8.3	5.6
				Ratio			
Times-interest-earned	2.6	3.0	2.8	4.1	3.2	4.6	3.4
				Percent			
Non-CRP enrollees:							
Profitability:							
Average return on assets	0.6	0.6	-0.3	0.0	-0.2	0.1	0.2
Share of farms with positive:							
Net cash income	39	60	42	61	55	46	50
Net farm income	61	68	61	70	69	72	67
Solvency:							
Debt-asset	12	15	10	16	13	7	11
Favorable/total	57	61	57	62	63	69	62
Vulnerable/total	7	6	4	6	3	2	4
Efficiency:							
Operating expense ratio	84	82	90	79	82	83	83
				Years			
Asset turnover ratio	5.6	4.6	7.2	4.4	5.0	6.3	6.3
				Ratio			
Times-interest-earned	2.9	3.2	3.2	3.4	3.6	5.2	3.5

Source: Farm Costs and Returns Survey, 1991.

Table 4—Balance sheet for CRP enrollees and nonenrollees, by CRP production region

Item	Northwest	Northern Plains	Southern Plains	Western Corn Belt/ Lake States	Eastern Corn Belt/ Lake States	South	All farms
				Dollars/farm			
CRP enrollees:							
Total assets:	758,024	455,943	526,496	342,557	338,903	381,973	420,032
Total current assets	78,319	80,280	135,898	38,765	46,576	38,881	61,726
Total noncurrent assets:	679,705	375,663	390,598	303,793	292,327	343,092	358,306
Farm equipment	104,241	63,467	62,058	40,047	44,227	33,702	49,580
Livestock for breeding	23,836	24,782	18,852	8,053	3,476	5,110	12,511
Land and buildings	549,796	285,928	307,169	253,547	243,957	303,852	294,723
Other noncurrent assets	1,832	1,485	2,519	2,146	668	428	1,493
Total debt:	182,261	92,670	108,937	51,409	39,035	25,457	64,519
Current liabilities	39,939	33,651	45,315	14,841	10,519	8,959	20,987
Noncurrent liabilities:	142,322	59,019	63,622	36,568	28,516	16,497	43,532
Nonreal estate	29,141	8,071	11,388	4,947	3,092	3,177	6,712
Real estate liabilities	113,180	50,948	52,234	31,621	25,424	13,321	36,820
Net worth	575,764	363,273	417,559	291,149	299,868	356,516	355,513
Non-CRP enrollees:							
Total assets:	427,365	403,370	314,388	334,045	341,209	274,739	379,358
Total current assets	57,486	73,506	51,769	57,626	51,353	39,216	54,596
Total noncurrent assets:	369,879	329,864	262,618	276,419	289,856	235,523	324,762
Farm equipment	46,747	55,406	36,100	59,558	52,703	28,366	44,197
Livestock for breeding	21,607	27,920	18,119	16,213	9,124	9,772	15,688
Land and buildings	300,466	245,184	207,926	197,338	227,237	197,159	263,756
Other noncurrent assets	1,060	1,353	474	3,310	792	227	1,121
Total debt:	54,196	59,704	30,961	54,600	45,432	20,567	44,272
Current liabilities	17,253	25,874	11,378	17,267	14,680	7,091	15,045
Noncurrent liabilities:	36,942	33,829	19,583	37,333	30,753	13,476	29,227
Nonreal estate	4,255	5,639	3,253	7,109	4,616	2,619	4,689
Real estate liabilities	32,687	28,190	16,329	30,224	26,136	10,858	24,538
Net worth	373,169	343,666	283,427	279,445	295,777	254,172	335,086

Source: Farm Costs and Returns Survey, 1991.
See figure 1 for regions.

Whole-Farm Enrollees

About one-third of CRP payments went to *whole-farm enrollees*. This group represented 3 percent of all farms, but included more than one-third of all CRP enrollees (table 5). Compared with *part-farm enrollees*, whole-farm enrollees were older and less likely to be full-time farmers. The average age for whole-farm enrollees was 62 years compared with 53 for part-farm enrollees (table 5). Only 25 percent of whole-farm enrollees considered farming as their primary occupation, compared with 76 percent for part-farm enrollees. Whole-farm enrollees supplied only 191 hours of labor annually to the farming operation. A large share (42 percent) of whole-farm enrollees were located in the Western Corn Belt/Lake States region. Whole-farm operations were smaller in terms of total assets: 73 percent reported less than $250,000 in total assets. Most of their assets (89 percent) were in the form of land and buildings, with little investment in equipment or breeding livestock (table 6). The combination of greater operator age, small farm size, and lower investment in non-real-estate assets suggests that whole-farm enrollees were not likely to return to full-time farming when their CRP contracts expire.

Whole-farm enrollees were profitable, with 88 percent reporting positive net farm income (table 7). They also tended to be financially solvent, with 86 percent classified in a "favorable" financial status, that is, positive net farm income and a debt-asset ratio of less than 0.40. Over 90 percent of these farms received more than a third of their gross cash farm income in the form of CRP payments, indicating that their financial strength may be partially attributable to CRP enrollment.

Table 5—Selected structural characteristics of CRP enrollees compared with nonenrollees, by production specialty

Item	Enrollees by production specialty[1]										
	Whole-farm enrollees	Small grain[2]	Feed grain[3]	Cotton	Other	Red meat animals[4]	Dairy	Other	All enrollees	Non-enrollees	All farms
						Number					
Farms	66,243	15,555	27,463	3,072	13,956	52,098	4,035	3,430	185,852	1,914,048	2,099,900
						Percent					
Farm operator debt	1	2	3	--	1	5	--	--	12	88	100
Farm assets	2	1	2	--	1	3	--	--	10	90	100
CRP payments	31	16	14	3	5	29	1	1	100	--	100
						Acres					
Land use:											
Acres owned	231	1,113	442	705	457	788	398	198	520	219	246
Acres operated	219	1,921	764	1,374	773	1,329	580	252	822	596	616
CRP acres	130	346	120	363	94	165	78	58	155	--	14
Diversion acres	3	102	30	103	35	24	12	6	25	9	10
Hay acres	3	40	18	11	43	61	78	43	41	30	30
Pasture/range	15	248	64	198	109	659	83	48	178	178	178
Cropland acres	5	735	430	594	242	159	212	53	206	114	122
						Percent					
CRP dependent[5]	93	29	14	13	27	32	--	57	50	0	4
Total assets:											
>$750,000	2	27	24	30	19	18	18	4	14	11	11
<$250,000	73	30	35	20	41	42	30	56	50	59	58
Annual sales:											
<$50,000	99	44	41	19	58	57	27	81	68	73	73
$50,000-99,999	1	28	24	45	16	19	26	0	14	12	12
$100,000-249,999	--	21	25	27	17	17	33	7	13	10	10
>$250,000	--	7	10	10	9	7	13	12	5	5	5
Operator characteristics:											
<40 years old	10	19	27	28	16	17	26	30	17	20	20
>60 years old	52	42	37	56	39	47	63	41	47	44	44
Farming primary occupation	25	85	73	94	73	76	97	28	58	56	56
						Years					
Average operator age	62	54	49	50	55	54	52	46	56	53	53
						Hour					
Annual operator labor	191	1,882	1,872	2,053	1,788	1,880	3,121	1,228	1,288	1,529	1,508
						Percent of specialized farms					
Regional distribution:											
Northwest	1	34	--	--	5	4	0	0	5	7	7
Northern Plains	10	56	20	--	24	35	31	14	24	9	11
Southern Plains	6	2	3	84	3	7	--	--	6	13	13
Western Corn Belt/Lake States	42	2	52	1	5	30	50	29	33	16	18
Eastern Corn Belt/Lake States	18	--	19	--	12	6	5	17	12	14	13
South	20	4	7	15	36	15	3	39	16	28	27
Other States	3	2	--	--	15	3	11	1	4	13	11
Total United States	100	100	100	100	100	100	100	100	100	100	100

[1]Production specialty is defined as a farm having 50 percent or more of the value of farm production from a commodity or related group of commodities. [2]Barley, oats, and wheat. [3]Corn, sorghum, and soybeans. [4]Beef, hogs, and sheep. [5]More than one-third of gross cash farm income in the form of CRP payments.

Source: Farm Costs and Returns Survey, 1991.

Table 6—Balance sheet for CRP enrollees and nonenrollees by farm production specialty

Item	Whole-farm enrollees	Small grain[1]	Feed grain[2]	Cotton	Other crops	Red meat animals[3]	Dairy	Other livestock	All farms
					Dollars/farm				
CRP enrollees:									
Total assets:	200,642	609,086	551,606	626,400	626,713	506,380	513,400	299,053	420,032
Total current assets	14,947	93,813	74,495	207,477	119,808	81,550	48,559	64,922	61,726
Total noncurrent assets:	185,695	515,273	477,111	418,923	506,905	424,831	464,841	234,131	358,306
Farm equipment	7,650	96,811	88,399	112,624	81,129	54,906	77,343	35,948	49,580
Livestock for breeding	237	5,997	7,611	4,395	8,677	30,172	65,525	10,571	12,511
Land and buildings	177,608	410,392	377,005	298,712	413,951	338,727	319,679	186,735	294,723
Other noncurrent assets	201	2,073	4,097	3,192	3,149	1,026	2,294	878	1,493
Total debt:	14,859	127,408	90,654	141,873	86,635	84,982	81,866	38,641	64,519
Current liabilities	2,140	32,575	27,541	65,119	29,746	32,678	30,444	16,074	20,987
Noncurrent liabilities:	12,719	94,833	63,113	76,753	56,890	52,304	51,423	22,567	43,532
Non-real estate	278	17,390	8,114	12,882	10,064	8,853	11,467	14,027	6,712
Real estate liabilities	12,441	77,443	54,998	63,872	46,826	43,451	39,956	8,540	36,820
Net worth	185,783	481,678	460,952	484,527	540,077	421,398	431,533	260,412	355,513
Non-CRP enrollees:									
Total assets:	--	345,045	392,386	568,997	402,382	334,956	549,820	355,945	379,358
Total current assets	--	55,676	67,607	96,469	52,132	48,312	79,063	49,502	54,596
Total noncurrent assets:	--	289,369	324,779	472,528	350,250	286,644	470,757	306,443	324,762
Farm equipment	--	72,290	74,705	154,229	38,611	30,954	77,852	32,750	44,197
Livestock for breeding	--	5,919	5,164	6,153	3,697	19,182	69,036	21,752	15,688
Land and buildings	--	209,968	243,573	305,724	306,117	236,118	321,741	251,569	263,756
Other noncurrent assets	--	1,193	1,336	6,422	1,825	391	2,127	373	1,121
Total debt:	--	57,807	61,001	105,387	44,585	28,126	101,077	46,868	44,272
Current liabilities	--	15,900	22,576	53,356	15,087	9,968	30,217	11,824	15,045
Noncurrent liabilities:	--	41,908	38,426	52,031	29,498	18,158	70,860	35,044	29,227
Non-real estate	--	4,652	6,441	19,850	4,137	2,578	16,095	4,090	4,689
Real estate liabilities	--	37,256	31,984	32,181	25,361	15,581	54,764	30,955	24,538
Net worth	--	287,237	331,384	463,610	357,797	306,829	448,743	309,076	335,086

[1]Barley, oats, and wheat. [2]Corn, sorghum, and soybeans. [3]Beef, hogs, and sheep.
Source: Farm Costs and Returns Survey, 1991.

The Farm Credit System (FCS) was the major lender to whole-farm enrollees, supplying about 40 percent of their farm operator debt. Thus, FCS institutions in regions with high CRP enrollment are likely to have a greater interest in policy debates concerning the CRP program.

For whole-farm enrollees, the decision to return land to production may have significant consequences. Since the operator would spend more time on the farm and/or need to acquire additional equipment to return land to production, leasing land to other operators may be an alternative. Because the risk-free income provided by the CRP may be preferable to income received from leasing to other operators, whole-farm enrollees may prefer CRP contract extensions.

Part-Farm Enrollees

CRP enrollees with farm production, part-farm enrollees, represented 6 percent of all farms and received 68 percent of all CRP payments to farm operators. Part-farm enrollees received only 6 percent of their gross cash farm income from CRP payments and reported 23 percent of acres owned as enrolled in the CRP. In contrast to whole-farm enrollees, part-farm enrollees were younger, supplied more operator labor, and most considered farming their primary occupation. Characteristics of this group were examined for seven production specialties: small grains, feed grains, cotton, other crops, red meat animals, dairy, and other livestock.[2]

[2]Production specialties were defined using total farm production. Specialized farms received 50 percent or more of total value of farm production from a commodity or related group of commodities.

Table 7—Selected financial performance statistics for CRP enrollees versus non-enrollees, by farm production specialty

Item	Whole-farm enrollees	Small grain[1]	Feed grain[2]	Cotton	Other crops	Red meat animals[3]	Dairy	Other livestock	All farms
					Percent				
CRP enrollees:									
Profitability:									
Average return on assets	2.9	3.3	2.5	-3.1	1.7	1.5	0.0	1.9	2.0
Share of farms with positive:									
Net cash income	71	81	72	59	72	70	93	62	72
Net farm income	88	83	84	47	75	73	84	64	81
Solvency:									
Debt-asset	7	21	16	23	14	17	16	13	15
Favorable/total	86	61	72	43	69	64	74	44	73
Vulnerable/total	3	3	2	36	5	12	--	--	6
Efficiency:									
Operating expense	64	72	73	104	81	79	75	76	77
					Years				
Asset turnover	16.6	5.9	5.0	4.5	5.6	4.5	3.8	5.0	5.6
					Ratio				
Times-interest-earned	5.2	3.0	3.7	0.1	3.4	3.4	3.1	3.8	3.4
					Percent				
Non-CRP enrollees:									
Profitability:									
Average return on assets	--	-0.5	1.1	3.3	1.1	-0.8	0.0	0.0	0.2
Share of farms with positive:									
Net cash income	--	62	65	63	40	46	84	49	50
Net farm income	--	69	72	61	68	65	80	62	67
Solvency:									
Debt-asset	--	17	16	19	11	8	18	13	12
Favorable/total	--	61	64	45	64	62	67	55	62
Vulnerable/total	--	5	5	10	4	4	4	5	4
Efficiency:									
Operating expense	--	77	80	83	84	86	78	82	82
					Years				
Asset turnover	--	5.9	4.7	2.8	5.6	7.1	3.5	4.7	5.6
					Ratio				
Times-interest-earned:	--	2.7	3.4	3.5	3.6	3.3	3.9	3.9	3.5

[1]Barley, oats, and wheat. [2]Corn, sorghum, and soybeans. [3]Beef, hogs, and sheep.
Source: Farm Costs and Returns Survey, 1991.

With the exception of cotton and dairy farms, enrollees had higher returns on assets and higher cash income than nonenrollees. In addition, enrollees were more likely to have positive farm income, more total assets, and greater debt-asset ratios (tables 7 and 8). With the exception of cotton farms, CRP enrollees were more efficient, with lower operating expense ratios. The poorer performance of cotton enrollees, relative to nonenrollees, was possibly due to their geographic concentration on the Southern Plains, which experienced poor growing conditions in 1991.

The CRP was popular among specialized small grain farms, with 30 percent participating in the CRP. This compares with a participation rate of 18 percent for specialized cotton farms and 11 percent for specialized feed grain farms. Most small grain enrollees (90 percent) were located in the Northern Plains and in the Northwest. Feed grain CRP enrollees tended to be

Table 8—Income statement for CRP enrollees and nonenrollees, by farm production specialty

Item	Whole-farm enrollees	Small grain[1]	Feed grain[2]	Cotton	Other	Red meat animals[3]	Dairy	Other livestock	All enrollees
					Dollars/farm				
CRP enrollees:									
Gross cash income:	7,457	93,858	102,429	128,427	106,263	105,659	129,207	55,558	69,200
Crop sales + CCC	148	50,664	71,907	77,517	72,188	11,279	11,291	11,852	25,247
Livestock sales	0	5,140	6,688	4,085	8,684	75,619	104,793	30,442	26,173
Deficiency and disaster	179	19,754	7,278	17,307	5,459	4,077	4,010	896	4,735
CRP payments	6,079	12,902	6,570	12,066	4,894	7,152	4,129	3,211	6,938
Recreation income	19	16	6	--	9	55	18	--	25
Other farm-related income	1,033	5,382	9,979	17,452	15,028	7,477	4,966	9,157	6,083
Less: Cash expenses:	4,780	67,552	74,809	134,044	85,763	82,921	96,969	42,309	53,198
Total variable expenses	1,766	41,484	50,275	100,699	63,223	66,426	76,275	31,937	38,809
Farm origin	139	6,462	9,376	6,839	8,828	41,076	26,817	13,129	15,091
Manufactured inputs	472	17,933	24,393	46,267	25,359	10,105	17,275	8,612	11,309
Labor	184	3,666	3,006	16,752	12,858	3,424	11,318	3,352	3,327
Other variable expenses	971	13,424	13,500	30,841	16,177	11,821	20,865	6,845	9,082
Fixed cash expense	3,014	26,067	24,534	33,345	22,540	16,496	20,694	10,372	14,390
Equals: Net cash farm income	2,677	26,307	27,620	-5,616	20,499	22,737	32,238	13,248	16,002
Plus: Noncash items:	3,347	193	-3,333	-5,194	207	-4,028	-9,500	-712	702
Depreciation expense	471	7,354	10,352	11,556	8,777	8,028	12,882	4,715	5,780
Net inventory change	201	4,872	3,764	5,302	5,072	489	707	155	1,660
Other noncash income	3,616	2,676	3,255	1,061	3,912	3,510	2,676	3,847	3,418
Equals: Net farm income	6,024	26,500	24,287	-10,809	20,706	18,709	22,738	12,536	15,300
Non-CRP enrollees:									
Gross cash income:	--	53,448	76,256	211,881	66,192	37,809	149,643	64,255	61,548
Crop sales + CCC	--	33,516	56,876	170,975	54,681	3,655	4,925	4,778	27,955
Livestock sales	--	3,209	8,406	4,285	2,840	30,882	139,696	39,712	26,189
Deficiency and disaster	--	12,455	5,307	17,048	1,486	985	1,450	587	2,160
Recreation income	--	18	23	16	24	43	42	156	39
Other farm-related income	--	4,251	5,644	19,557	7,161	2,244	3,530	19,023	5,204
Less: Cash expenses:	--	42,925	61,198	171,703	55,515	33,002	116,541	52,866	51,090
Total variable expenses:	--	28,748	42,125	135,517	44,017	26,376	96,435	43,219	39,947
Farm origin	--	3,254	8,541	8,335	5,083	14,110	44,025	20,092	12,605
Manufactured inputs	--	13,448	21,277	69,509	13,969	4,792	16,189	7,007	11,276
Labor	--	2,704	2,538	24,906	14,573	1,921	12,236	5,916	6,793
Other variable expenses	--	9,342	9,769	32,768	10,391	5,553	23,985	10,205	9,272
Fixed cash expense	--	14,177	19,072	36,185	11,498	6,627	20,106	9,647	11,143
Equals: Net cash farm income	--	10,523	15,059	40,179	10,677	4,806	33,102	11,390	10,458
Plus: Noncash items:	--	-1,556	257	-4,916	2,092	2,084	3,960	2,367	1,312
Depreciation expense	--	5,942	7,557	13,322	4,920	3,485	13,909	6,534	5,401
Net inventory change	--	2,047	4,253	6,097	2,756	1,491	5,838	3,467	2,647
Other noncash items	--	2,339	3,561	2,310	4,256	4,078	4,111	5,435	4,066
Equals: Net farm income	--	8,967	15,316	35,263	12,769	6,890	29,142	13,757	11,770

[1]Barley, oats, and wheat. [2]Corn, sorghum, and soybeans. [3]Beef, hogs, and sheep.

Source: Farm Costs and Returns Survey, 1991.

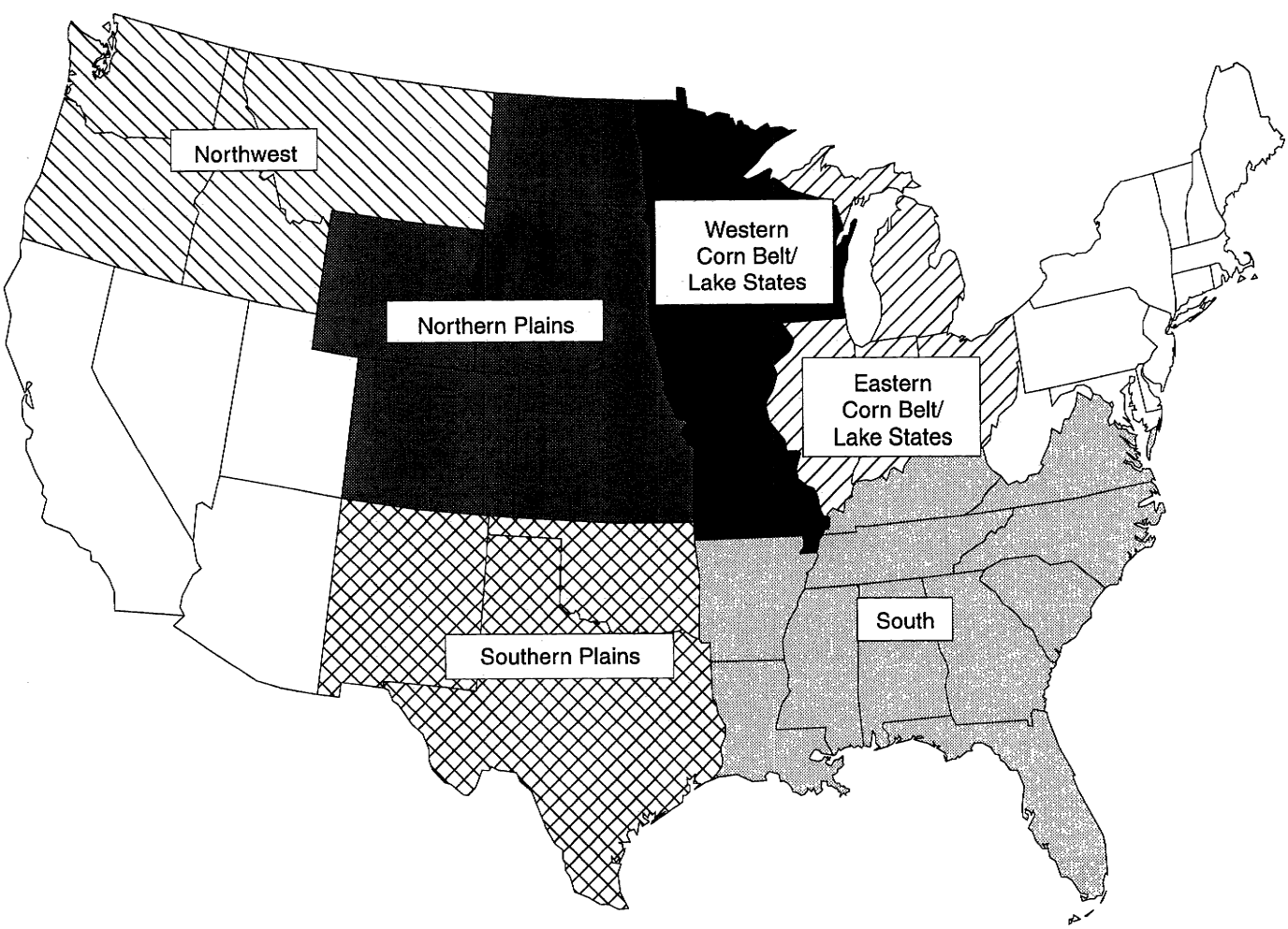
located in the Western Corn Belt/Lake States region (52 percent), while cotton enrollees were located in the Southern Plains (table 5). The importance of enrollees in the production of small grains, feed grains, and cotton suggests that changes in the CRP program will influence supplies of these commodities. Only 3 percent of all dairy farms and 6 percent of all red-meat-animal farms participated in the CRP.

Regional Characteristics of CRP Enrollees

CRP enrollees differed distinctly by production region and specialty (fig. 1). In terms of total assets, farms receiving CRP payments were largest in the Northwest (table 4). With the exception of the Corn Belt regions, enrollees owned more farm assets than did nonenrollees. Debt levels, average net cash farm income, and net farm income for CRP enrollees exceeded that of nonenrollees in the Northwest and Plains regions (table 2). Crop sales accounted for most cash receipts for enrollees in the Northwest, Corn Belt, and South, while livestock sales were dominant for enrollees in the Plains regions. Compared with nonenrollees, farms enrolled in the CRP were more profitable in all regions.

The Northern Plains region had the largest portion of CRP acres and received the largest share of CRP payments. About a third of total CRP acres were located in the Northern Plains, which received 29 percent of all CRP payments. The Western Corn Belt/Lake States region had the highest participation rate, with 17 percent of farm operators reporting CRP payments. In terms of acres operated, CRP enrollment was largest in the Northwest and smallest in the Corn Belt (table 1). CRP acres per farm were highest in the Northwest. A large portion of CRP enrollees reported acres

Figure 1
CRP production regions



allocated to wheat, hay, and/or pasture and range. Wheat accounted for the largest share of cropland acres for CRP enrollees in the Northwest as well as in the Northern and Southern Plains. For total acres operated, pasture/range and hay represented the largest land use in the Northwest, Northern Plains, and Southern Plains.

In some regions, CRP enrollees were expected to allot a portion of their acreage for wildlife habitats. Farm operators with CRP acres, therefore, can obtain additional income from leasing CRP land for recreational uses such as hunting. This was reflected in the recreation income category, which includes receipts from leasing real estate for hunting or other recreational activities. Income from recreation was minimal, however, averaging $25 per farm in 1991, and little difference was noted between enrollees and nonenrollees (table 2).

Other Regional Highlights

- A large share of Northwest CRP enrollees were full-time farming operations, with 89 percent of operators considering farming to be their primary occupation and 64 percent supplying over 1,500 hours of operator labor annually. Only 2 percent of Northwest enrollees were whole-farm enrollees, the lowest of all regions.

- Livestock was not a major enterprise among Northwest CRP enrollees. Enrollees generally received only 14 percent of their gross income from livestock, compared with 36 percent for nonenrollees. Also, 62 percent of Northwest CRP enrollees reported no livestock, and only 14 percent reported peak cattle numbers over 100.

- A large proportion of Northern Plains CRP enrollees appeared to be full-time farmers, with 80 percent of the operators considering farming to be their primary occupation. Most Northern Plains enrollees supplied over 1,500 hours of operator labor annually.

- With over 10 percent of farms classified as *vulnerable,* Northern and Southern Plains enrollees appeared to be under more financial stress than nonenrollees.

- Livestock was a major enterprise among CRP enrollees in both the Northern Plains and Southern Plains. Livestock receipts accounted for 51 percent of enrollees' gross income in the Northern Plains and 34 percent in the Southern Plains. In both the Northern and Southern Plains, over 30 percent of enrollees reported peak cattle numbers of over 100 head.

- The number of enrollees highly dependent on CRP payments for farm income was greatest in the South and both Corn Belt regions. Over 55 percent of enrollees in these regions received over 33 percent of their gross cash farm income in the form of CRP payments.

Influence of CRP Payments on Incomes per Farm

The phasing-out of CRP payments as contracts expire will likely affect the income levels of CRP enrollees. The magnitude and direction of these changes will depend on the ability of enrollees to generate income from CRP acres by expanding existing enterprises or leasing to other operators.

The sensitivity of 1991 incomes per farm to changes in CRP payments provided insight into the importance of CRP payments. Setting CRP payments at 0 reflects a worst-case scenario where CRP acres would generate no income from either crop/livestock production or rent. In this case, eliminating CRP payments would affect whole-farm enrollees the most. While 88 percent of these farms reported positive net farm income in 1991, only 63 percent would have reported positive incomes with CRP income at 0 (table 9). Using net cash income, the impacts were especially apparent: only 14 percent of farms with no production would have reported positive income with CRP rental rates at 0. The differences between net farm and net cash income impacts relate to nonmoney income, which comprises a substantial portion of income for whole-farm enrollees.[3] CRP enrollees in regions with a greater number of whole-farm enrollees, such as the Western Corn Belt/Lake States, would likely experience greater farm income impacts. Effects on the household income of whole-farm enrollees would be less dramatic, since they receive over 90 percent of income from off-farm sources. This compares with 60 percent for part-farm enrollees.

A large proportion of CRP acres may generate income to the farm operator through rental income or production. The percentage of CRP enrollees that would have reported positive incomes in 1991 was estimated assuming that, in lieu of CRP income, operators received rental income equal to the State average cash rental rate for unirrigated cropland. Enrollees would probably rent out only that portion of land expected to return to crop production. A recent Soil and Water

[3]Nonmoney income includes the value of home consumption and the gross imputed rental value of the dwelling.

Table 9—The impact of changes in CRP rental rates on the share of CRP enrollees reporting negative income, by production specialty and CRP region

Item	Farms with positive net farm income assuming CRP income equals:			Farms with positive net cash income assuming CRP income equals:		
	FCRS[1]	$0	Cash rent[2]	FCRS	$0	Cash rent
			Percent			
Production specialty:						
No production	88	63	82	71	14	61
Small grain[3]	83	64	76	81	62	76
Feed grain[4]	84	69	78	72	61	66
Cotton	47	44	45	59	49	53
Other crops	78	64	76	72	56	64
Red meat animals[5]	73	59	71	70	52	66
Dairy	84	79	84	93	87	87
Other livestock	64	57	64	62	41	55
Production region:						
Northwest	83	54	74	84	55	72
Northern Plains	74	53	66	74	56	67
Southern Plains	77	36	53	78	37	52
Western Corn Belt/Lake States	78	41	78	89	71	89
Eastern Corn Belt/Lake States	59	29	59	87	75	86
South	71	55	55	80	62	74
All enrollees	72	41	65	81	62	76

[1]As reported in the 1991 Farm Costs and Returns Survey. [2]State average cash rent on unirrigated cropland x the percent of production expected to be returned to production in that State. [3]Barley, oats, and wheat. [4]Corn, sorghum, and soybeans. [5]Beef, hogs, and sheep.

Conservation Society (SWCS) survey provided data on the average percentage of land to be returned to crop production in each State.[4] This percentage was subsequently used to calculate the potential rental income of CRP acres according to the following formula:

CRP rental income/farm = CRP acres/farm x *State average dryland cropland cash rental rate* x *State average percent of land to be returned to crop production.*

Because CRP acres were generally considered marginal and likely to receive less-than-average cash rents, the calculation above could be considered a best-case scenario. The results demonstrate that the loss of CRP payments will affect the operator's financial condition less if enrollees are able to generate income from retired CRP acres (table 9). While 72 percent of all enrollees reported positive net farm income in 1991, that share would have declined to 65 percent if cash rent had been substituted for CRP payments.

[4]In 1993, SWCS conducted a national survey of CRP contract holders. Questionnaires were sent to about 17,000 enrollees (representing 5 percent of contract holders), asking respondents what they intended to do with CRP land if contracts were not renewed.

Potential for Livestock Expansion

A primary concern among livestock interests is the effect on the livestock industry of bringing CRP acres back into production. The SWCS survey indicated that about 8.3 million acres currently enrolled in the CRP would be used for pasture or grazing if contracts were not renewed. If all of these acres were used for beef production, there would be a substantial increase in cattle numbers. However, there are several factors that suggest this will probably not occur.

Potential livestock expansion is restricted by the number of CRP acres per farm. Using State average stocking rates, only 21 percent of all enrollees would have sufficient CRP acres to stock 50 or more *animal units* on CRP acres (table 10). Using this rate, the greatest potential for the expansion of beef production is in the Western Corn Belt/Lake States, where 43 percent of CRP enrollees indicated potential stocking rates of greater than 50 animal units.

Seventy-nine percent of all enrollees have a potential stocking rate from CRP acres of less than 50 animal units. Most farms, therefore, would likely decide that using CRP land for livestock would be an inefficient

Table 10—The current and potential importance of livestock on farms enrolled in the CRP, by production specialty and region

Item	Farms with no pasture	Peak 1991 cattle numbers (head/farm)			Stocking potential from CRP acres (animal units/farm)	
		0	1-100	Over 100	0-50	Over 50
				Percent		
Production specialty:						
No production	94	94	5	1	76	24
Small grain[1]	60	72	14	14	87	13
Feed grain[2]	73	68	23	9	74	26
Cotton	32	75	12	13	75	25
Other crops	57	63	30	7	81	19
Red meat animals[3]	20	19	46	35	80	20
Dairy	16	82	17	1	79	21
Other livestock	64	77	14	9	88	12
Production region:						
Northwest	66	62	24	14	85	15
Northern Plains	41	49	19	32	93	7
Southern Plains	30	48	19	33	90	10
Western Corn Belt/Lake States	73	73	20	7	57	43
Eastern Corn Belt/Lake States	80	70	26	4	93	7
South	68	65	26	9	83	17
All enrollees	61	64	22	14	79	21

[1]Barley, oats, and wheat. [2]Corn, sorghum, and soybeans. [3]Beef, hogs, and sheep.

alternative unless there is already an ongoing livestock enterprise. Livestock enterprises were not frequent among CRP enrollees. More than 60 percent of all farms enrolled in the CRP report neither pasture nor cattle, and only 14 percent of the enrollees reported peak cattle numbers of more than 100 head (table 10). This suggests that many current enrollees lack both the expertise and equipment to handle livestock. Cattle were common among CRP enrollees in the Northern and Southern Plains, where over half reported cattle in 1991. About one-third of CRP enrollees in these regions report cattle numbers of 100 head or more. However, while operators in these regions probably have the necessary expertise, limited rainfall and the resulting low stocking rates probably limit expansion opportunities.

CRP acreage was previously cropland and, therefore, unlikely to have well-maintained fences. To expand production onto CRP acreage, livestock producers would have to cover not only their variable costs, but also the fixed costs associated with establishing fences and handling facilities. The SWCS survey asked CRP contract-holders if they would keep their CRP acres in grass and follow a grazing plan for at least 5 years after contract expiration, with CRP rental payments, if the Government provided half the cost of constructing fencing and watering systems. Respondents indicated that they would be willing to do so on only 11 percent of CRP acres.

Implications

CRP enrollees differ with respect to their structural and financial characteristics. These differences may have direct implications for policy options considered as CRP contracts expire. Because whole-farm enrollees were more dependent than others on CRP payments for farm income, they were likely to have a strong interest in contract extensions. Because many of these operations were small and operated by farmers over 60 years old, objectives other than minimizing erosion may have affected their decision to enroll. For example, the risk-free income provided by the CRP may be very appealing to an operator considering retirement. Thus, these CRP holdings may not represent the most environmentally fragile land.

By contrast, part-farm CRP enrollees were younger and more likely to consider farming as their primary occupation. Because the farms were less reliant on CRP income, elimination of the CRP program would probably not have less significant consequences for

them. Since these operations already have the necessary equipment and are supplying significant amounts of operator labor, they were considered more likely to return CRP land to production.

The disparity between whole- and part-farm enrollees has policy implications. It is likely that these two groups would have different objectives when considering re-enrollment in the CRP, if extensions were enacted. For example, whole-farm enrollees may prefer the security of income afforded by CRP contracts. Consequently, they may accept lower CRP rental rates to re-enroll than a part-farm enrollee for comparable land.

References

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Appendix A: Data Reliability

Survey results may differ from data collected in a complete census, using the same questionnaires, instructions, and enumerators. A sample survey estimate has two possible types of error: nonsampling and sampling. The accuracy of the estimate depends on both types of errors, but the full extent of the nonsampling error is unknown. Some possible causes of nonsampling errors are mistakes by enumerators, incorrect answers by respondents, and questionnaire design. Efforts made to minimize these errors and maintain survey accuracy included training of data collectors and detailed review and edit of questionnaires.

A measure of sampling variability, called the sampling error, is available from survey results. Sampling errors may be expressed as a percentage of the estimate. These percentages represent the relative standard error of the estimate and are often referred to as coefficients of variation (C.V.). In general, the smaller the C.V., the greater the reliability of the estimate. The relative standard error can also be used to evaluate the statistical significance of means between groups. A statistical test (t-test) for a comparison of two groups can be constructed by taking the difference between the means of the two groups and dividing by the square root of the sum of the squared standard errors of the two groups. Differences among means for various groupings presented in this report were statistically tested. Although t-tests are not reported here, the discussion in each section emphasizes comparisons among groups only when means were statistically significant at the 95-percent level.

Appendix B: Financial Variables

Solvency measures overall financial risk and was evaluated using the debt-to-asset ratio. Total assets are normally valued using an annual average. The FCRS, however, only provided end-of-year estimates of assets and debt.

$$\textit{Debt/asset ratio} = \frac{\textit{Total farm operator debt including accounts payable}}{\textit{Total farm business assets.}}$$

Profitability measures how efficiently the farm business uses its assets and was evaluated using returns on assets.

$$\textit{Returns on assets} = \frac{\textit{Net farm income - management charge - unpaid family labor + interest paid}}{\textit{Total assets.}}$$

The imputed management charge, 5 percent of the net value of production, was consistent with other USDA studies using FCRS data (Morehart, Johnson, and Banker). The FCRS provided information on the hours of unpaid labor supplied by family members. Unpaid family labor costs were subsequently estimated using farm wage rates provided by National Agricultural Statistics Service (NASS) surveys.

The *operating expense ratio* measures the degree to which operators use resources at their disposal to produce income without wasted effort or resources.

$$\textit{Gross} = \frac{\textit{Cash operating expenses}}{\textit{Gross cash farm income.}}$$

Times-interest-earned measures the debt capacity of the farm business.

$$\textit{Times-interest-earned} = \frac{\textit{Net farm income before interest and taxes}}{\textit{Gross cash farm income.}}$$

The asset-turnover ratio measures the gross farm income generated by farm business assets. It represents the number of years required for farm production to equal the value of farm assets.

$$\textit{Asset/turnover ratio} = \frac{\textit{Current value of farm assets}}{\textit{Gross cash farm income.}}$$

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