

1.4 Farm Real Estate Values, Rents, and Taxes

Farm real estate values and cash rents are important indicators of the financial condition of the farm sector. Farm real estate values are influenced by net returns from agricultural production, capital investment in farm structures, interest rates, government commodity programs, and nonfarm demands for farmland. Values have been on the rise since 1987. By early 1995, the average value of U.S. farm real estate exceeded the previous high set in 1982 before values began to decline. Average value continued to increase through 1995. Cash rents also generally increased during 1995 and 1996.

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Values of farm real estate (farmland and attached buildings and dwellings) are important to landowners, prospective buyers, lenders, tax assessors, agricultural producers, and local governments. Farm real estate is the major asset on the farm sector balance sheet (currently accounting for more than 75 percent of total U.S. farm assets), and its value provides an indicator of the general economic health of the agricultural sector. Farm real estate underlies the financial stability of many farm businesses whose portfolios derive a large proportion of their value from real estate. In addition to being the largest single investment item in a typical farmer's portfolio, farm real estate is the principal source of collateral for farm loans, enabling farm operators to finance the purchase of additional farmland and equipment or to finance current operating expenses. Some 52.5 percent of the total farm sector debt of \$155 billion at the end of 1996 was real estate debt—either mortgages for purchase of farmland or short- or intermediate-term debt secured by farmland. Wide swings in farm real estate values alter the equity

positions, creditworthiness, and borrowing capacity of those farm operators and landowners who hold large percentages of assets in the form of farmland.

Farm Real Estate Values

The rapid increase in farmland values during the 1970's and early 1980's was followed by a sharp decline during 1982-87, then a slow upward trend beginning in 1987 (fig. 1.4.1). Since 1987, average farmland values in the Nation have rebounded 48.6 percent, from \$599 per acre to \$890 in January 1996. In real or inflation-adjusted terms (1982 dollars), however, this amounts to only a 10.8-percent gain. It was not until January 1, 1995, that the average nominal value per acre surpassed the record high of \$823 set in 1981. But even with continued increases in 1995, the January 1996 average, on a real (or inflation-adjusted) basis, was still 40 percent below the 1981 peak.

U.S. farm real estate values rose 7.0 percent during 1995 (table 1.4.1). This represents an

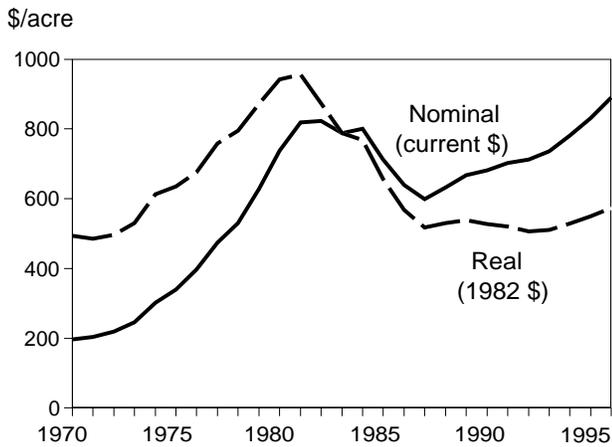
Table 1.4.1—Average per-acre nominal value of farm real estate, by State, January 1, 1989-96¹

State	1989	1990	1991	1992	1993	1994	1995	1996	Change 1995-96
	<i>Dollars</i>								<i>Percent</i>
Northeast	1,825	1,848	1,897	1,977	2,095	2,311	2,414	2,485	2.9
Maine	1,046	1,073	1,057	1,033	1,130	1,232	1,245	1,291	3.7
New Hampshire	2,253	2,269	2,194	2,103	2,256	2,459	2,486	2,578	3.7
Vermont	1,226	1,262	1,248	1,223	1,342	1,463	1,479	1,534	3.7
Massachusetts	3,988	4,227	4,301	4,340	4,898	5,339	5,398	5,597	3.7
Rhode Island	5,289	5,564	5,619	5,627	6,304	6,871	6,947	7,204	3.7
Connecticut	4,715	5,033	5,158	5,241	5,959	6,495	6,567	6,810	3.7
New York	1,045	1,014	1,095	1,139	1,237	1,383	1,380	1,333	-3.4
New Jersey	4,947	5,494	6,341	6,710	6,942	7,407	8,052	8,172	1.5
Pennsylvania	1,936	1,929	1,937	2,073	2,056	2,247	2,339	2,505	7.1
Delaware	2,037	2,214	2,181	2,042	2,246	2,511	2,689	2,907	8.1
Maryland	2,534	2,563	2,394	2,530	2,911	3,310	3,707	3,826	3.2
Lake States	820	843	909	920	956	986	1,048	1,126	7.5
Michigan	983	1,005	1,086	1,106	1,131	1,214	1,329	1,470	10.6
Wisconsin	845	801	849	865	925	968	1,065	1,175	10.3
Minnesota	747	810	881	884	910	914	936	976	4.2
Corn Belt	1,108	1,111	1,153	1,190	1,235	1,331	1,448	1,578	9.0
Ohio	1,298	1,273	1,323	1,396	1,456	1,593	1,800	1,989	10.5
Indiana	1,249	1,254	1,291	1,325	1,395	1,504	1,654	1,801	8.9
Illinois	1,391	1,405	1,459	1,536	1,548	1,694	1,863	2,064	10.8
Iowa	1,095	1,090	1,139	1,153	1,212	1,281	1,349	1,442	6.9
Missouri	684	701	723	734	774	825	880	948	7.7
Northern Plains	387	401	403	400	401	432	458	478	4.5
North Dakota	317	321	337	318	335	353	373	383	2.5
South Dakota	273	291	293	286	273	286	302	319	5.5
Nebraska	511	524	517	517	514	562	596	632	6.0
Kansas	429	450	449	460	463	503	535	553	3.3
Appalachian	1,110	1,178	1,154	1,223	1,300	1,336	1,436	1,597	11.2
Virginia	1,397	1,665	1,490	1,643	1,636	1,690	1,771	1,925	8.7
West Virginia	731	664	704	843	849	869	910	965	6.0
North Carolina	1,364	1,355	1,382	1,455	1,573	1,609	1,749	1,970	12.6
Kentucky	910	978	958	988	1,077	1,136	1,250	1,377	10.2
Tennessee	1,037	1,067	1,095	1,130	1,245	1,250	1,336	1,526	14.2
Southeast	1,216	1,300	1,319	1,301	1,345	1,427	1,533	1,631	6.4
South Carolina	990	1,011	1,112	1,152	1,137	1,204	1,337	1,363	2.0
Georgia	1,030	1,079	1,095	1,025	1,131	1,154	1,256	1,358	8.1
Florida	1,880	2,070	2,110	2,033	2,037	2,165	2,219	2,306	3.9
Alabama	847	890	864	936	1,000	1,117	1,262	1,387	9.9
Delta States	809	806	834	820	866	912	972	1,009	3.8
Mississippi	717	736	766	754	777	836	886	917	3.5
Arkansas	801	796	841	815	880	927	983	989	0.6
Louisiana	959	925	920	926	972	1,000	1,082	1,176	8.7
Southern Plains	520	504	494	487	498	521	550	562	2.2
Oklahoma	518	491	477	482	496	517	547	547	0.0
Texas	521	507	498	488	499	522	550	566	2.9
Mountain	259	265	283	283	290	319	346	379	9.8
Montana	202	222	219	219	227	254	277	289	4.5
Idaho	593	658	654	680	682	774	836	905	8.3
Wyoming	144	153	159	145	159	180	192	206	7.3
Colorado	375	374	437	400	426	479	520	558	7.3
New Mexico	185	185	210	212	194	208	225	258	15.0
Arizona	276	267	291	311	316	325	347	399	15.0
Utah	426	398	417	445	491	537	606	697	15.0
Nevada	242	207	241	262	252	268	289	332	15.0
Pacific	1,175	1,259	1,362	1,410	1,453	1,510	1,549	1,675	8.2
Washington	777	821	864	880	892	1,025	1,065	1,117	4.9
Oregon	536	573	586	607	663	747	844	928	9.9
California	1,742	1,884	2,077	2,157	2,213	2,213	2,215	2,404	8.5
48 States	668	682	703	713	736	782	832	890	7.0

¹ Value of farmland and buildings in nominal dollars

Source: USDA, ERS, based on Agricultural Land Value Survey, June Agricultural Survey; and 1992 Census of Agriculture data.

Figure 1.4.1--Average real and nominal values of U. S. farm real estate, 1970-96



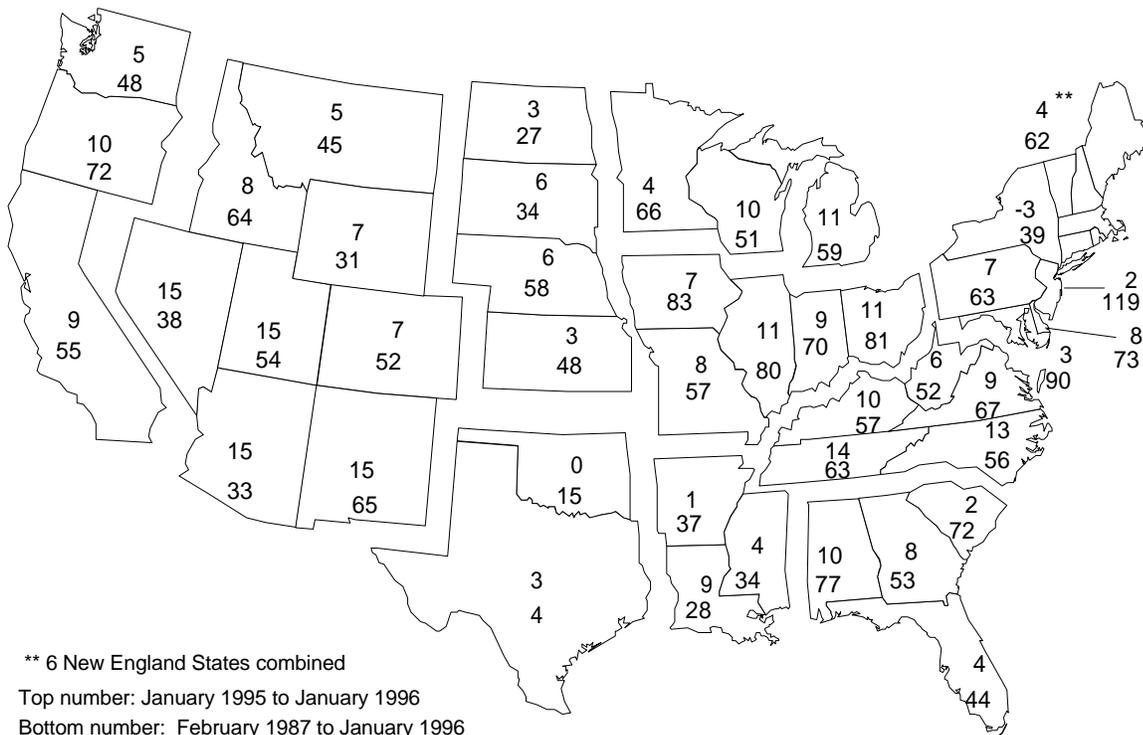
Source: USDA, ERS

inflation-adjusted increase of 4.4 percent (table 1.4.2). All States recorded increases except New York and Oklahoma. Several States in the Lake States, Corn Belt, Appalachian, and Mountain regions recorded double-digit increases in farm real estate values. The

largest regional increases occurred in the Appalachian, Mountain, and Corn Belt regions (11.2, 9.8, and 9 percent).

The 1995 increase was the strongest yearly gain since 1987. The 7.0-percent nominal increase during 1995 marked the 9th consecutive yearly increase since 1987. The largest State-by-State increases over the 1987-95 period occurred in several of the Northeast States, where most States never experienced the sharp declines in farm real estate value that characterized most other States during the early- to mid-1980's (fig. 1.4.2). Much of this increase can be attributed to strong nonfarm demand for farmland associated with population growth. Another set of relatively high increases since 1987 occurred in the Corn Belt, the region that also experienced the largest value declines between 1981 and 1986. The relatively small increase in Texas is largely a product of the beginning and end points of the time period being discussed. Texas farm real estate values continued to increase until the mid-1980's, before declining and then beginning a slow recovery later than most other States. The counter-cyclical pattern is partially attributable to changing conditions in the oil industry during the 1980's.

Figure 1.4.2--Percent change in farm real estate value per acre (nominal dollars), 1987-96 and 1995-96



** 6 New England States combined
 Top number: January 1995 to January 1996
 Bottom number: February 1987 to January 1996
 Source: USDA, ERS.

Table 1.4.2—Average per-acre real (inflation-adjusted) value of farm real estate, by State, Jan. 1, 1989-96¹

State	1989	1990	1991	1992	1993	1994	1995	1996	Change 1995-96
	<i>1982 dollars</i>								<i>Percent</i>
Northeast	1,473	1,430	1,408	1,410	1,454	1,563	1,596	1,603	0.6
Maine	844	830	783	736	784	833	823	833	1.1
New Hampshire	1,817	1,754	1,626	1,497	1,566	1,663	1,644	1,663	1.2
Vermont	989	976	925	871	931	989	978	990	1.2
Massachusetts	3,217	3,268	3,188	3,090	3,399	3,611	3,569	3,610	1.2
Rhode Island	4,266	4,302	4,165	4,007	4,375	4,648	4,593	4,647	1.2
Connecticut	3,803	3,891	3,823	3,732	4,135	4,393	4,342	4,393	1.2
New York	843	784	812	811	858	935	913	860	-5.8
New Jersey	3,990	4,247	4,700	4,778	4,818	5,010	5,324	5,271	-1.0
Pennsylvania	1,562	1,491	1,436	1,476	1,427	1,520	1,547	1,616	4.5
Delaware	1,643	1,712	1,617	1,454	1,559	1,698	1,778	1,875	5.5
Maryland	2,044	1,981	1,774	1,801	2,020	2,239	2,451	2,468	0.7
Lake States	662	652	674	655	663	667	693	726	4.8
Michigan	793	777	805	788	785	821	879	948	7.9
Wisconsin	682	619	629	616	642	655	704	758	7.6
Minnesota	603	626	653	629	632	618	619	630	1.7
Corn Belt	894	859	855	848	857	901	957	1,018	6.3
Ohio	1,047	984	981	994	1,010	1,077	1,190	1,283	7.8
Indiana	1,007	969	957	943	968	1,017	1,094	1,162	6.2
Illinois	1,122	1,086	1,081	1,094	1,074	1,145	1,232	1,331	8.1
Iowa	883	843	844	821	841	867	892	930	4.3
Missouri	552	542	536	523	537	558	582	612	5.1
Northern Plains	312	310	299	285	278	292	303	308	1.8
North Dakota	256	248	250	226	232	239	247	247	0.1
South Dakota	220	225	217	204	189	194	200	206	2.9
Nebraska	412	405	383	368	357	380	394	408	3.5
Kansas	346	348	333	328	321	340	354	357	0.8
Appalachian	895	910	855	870	902	904	949	1,030	8.5
Virginia	1,127	1,287	1,104	1,170	1,135	1,143	1,171	1,242	6.0
West Virginia	590	513	522	600	589	588	602	622	3.4
North Carolina	1,100	1,048	1,024	1,036	1,092	1,088	1,157	1,271	9.9
Kentucky	734	756	710	703	747	769	826	888	7.5
Tennessee	836	825	812	805	864	845	884	984	11.4
Southeast	980	1,005	978	926	934	965	1,014	1,052	3.8
South Carolina	799	782	824	820	789	814	884	879	-0.5
Georgia	831	834	812	730	785	780	830	876	5.5
Florida	1,516	1,600	1,564	1,448	1,414	1,465	1,467	1,488	1.4
Alabama	683	688	640	666	694	756	834	895	7.2
Delta States	653	623	618	584	601	617	643	651	1.3
Mississippi	578	569	568	537	539	566	586	592	0.9
Arkansas	646	615	623	580	611	627	650	638	-1.9
Louisiana	774	715	682	659	675	677	716	759	6.0
Southern Plains	420	389	366	347	346	353	363	363	-0.2
Oklahoma	418	380	354	343	344	350	362	353	-2.5
Texas	420	392	369	347	346	353	364	365	0.4
Mountain	209	205	210	202	201	216	229	244	6.9
Montana	163	172	162	156	158	172	183	186	1.8
Idaho	478	509	485	484	473	524	553	584	5.6
Wyoming	116	118	118	103	110	121	127	133	4.8
Colorado	302	289	324	285	296	324	344	360	4.7
New Mexico	149	143	156	151	135	141	149	166	11.9
Arizona	223	206	216	221	219	220	229	257	12.2
Utah	344	308	309	317	341	363	401	450	12.2
Nevada	195	160	179	187	175	181	191	214	12.1
Pacific	948	974	1,008	1,001	1,008	1,021	1,024	1,080	5.5
Washington	627	635	640	627	619	693	704	721	2.3
Oregon	432	443	434	432	460	505	558	599	7.3
California	1,405	1,457	1,540	1,536	1,536	1,497	1,465	1,551	5.9
48 States	539	528	521	507	511	529	550	574	4.4

¹ Nominal values as of Jan. 1 for farmland and buildings adjusted by the Gross Domestic Product implicit price deflator indexed to 1982 = 100.
Source: USDA, ERS, based on Agricultural Land Value Survey, June Agricultural Survey; and 1992 Census of Agriculture data.

In 1996, California, Florida, and the Northeast States continued to record the highest average per-acre values for farm real estate. Farm real estate values in the Northeast reflect continued pressure from nonagricultural sources for conversion to residential or other urban use. The relatively high values in California and Florida are the consequence of both urban pressures and the presence of intensive agriculture for the production of high-valued crops. Alternatively, the low average values in the Mountain States can be attributed to large amounts of arid rangeland and less productive cropland. Wyoming, New Mexico, and Montana recorded the lowest average per-acre values (table 1.4.1).

Variation among States in the 1995 rate of increase in value can be attributed to several factors. For the Mountain States, growing recreational use of rural land and population pressures related to urbanization appear to be the driving forces behind value gains. The Mountain region experienced the largest population growth of any region from 1990 to 1993 (8.2 percent) (U.S. Dept. Of Commerce, 1995) and contained six of the ten fastest-growing States. The increasing farmland values in the Corn Belt during 1995 can be attributed to increased net returns from corn and soybeans, the major agricultural products of the region, as well as continued improvements in yields.

As of January 1, 1996, the total value of U.S. farm real estate reached \$860 billion, while the average per-farm value (total value divided by the number of farms) was \$417,761 (tables 1.4.3 and 1.4.4). By State, the total value of farm real estate was greatest for California, Texas, and Illinois, and lowest for several of the New England States. State-level averages ranged from \$178,497 per farm in West Virginia to \$1,883,308 in Arizona. Variation among States in the per-farm average results from differences in per-acre values and differences in average size of operation. West Virginia farms averaged 185 acres per operation, compared with 4,780 acres in Arizona. These per-farm values are more appropriate as indicators of the value of land resources associated with typical farm operations than as indicators of the equity or wealth of typical individual farm operators. The land resource assets of most farm operations have multiple owners. Many operations lease significant proportions of the land they operate, others are organized as partnerships or corporations, and many operations use owned land as loan collateral, thus giving lenders an implicit interest in the land asset.

Cash Rents

A substantial proportion of U.S. farmland is operated under some form of lease, approximately 43 percent in 1992, according to the 1992 Census of Agriculture. The most common form of lease, the cash rental agreement, is characterized by a fixed payment negotiated before planting, whereas in share rental agreements, payment to the landowner varies with the amount of product harvested. Under cash rental arrangements, the tenant bears all of the production and market-price risk; share rental arrangements implicitly divide production and market risks between tenant and landlord.

The term “cash rent” refers to the amount of cash paid by a tenant to a landowner for use of a farmland parcel as an input in agricultural production. Cash rents are generally considered a shortrun indicator of the return to a landowner’s investment in the land, though to tenants, cash rents represent a major production expense. Because rents reflect the income-earning capacity of the land, they vary widely across the country. Cropland rents tend to be highest in States and regions where higher-value crops are grown. During 1996, the highest average rents were reported for irrigated land in California at \$210 per acre (table 1.4.5). California produces large shares of high-value specialty crops, vegetables, fruits, and nuts. Cropland suitable for corn and soybean production in the Midwest also commands high rents. The highest rents for nonirrigated cropland in 1996 were reported in Illinois (\$106 per acre) and Iowa (\$105 per acre).

Average cash rents for cropland were higher in most States for the 1996 crop year than in 1995. This pattern was roughly similar for both irrigated and nonirrigated cropland. An upward pattern was evident in most regions.

During 1996, average cash rents for pasture varied from \$40 per acre in Wisconsin to \$5.40 per acre in Texas, but for many States, survey data were insufficient to make an estimate (table 1.4.6). Average cash rents for pasture were almost uniformly lower than in 1995 in the Northern Plains, Appalachian, Southeast, Delta, and Southern Plains. For the Corn Belt, Mountain, and Southeast regions, some States reported higher cash rents compared with 1995.

Table 1.4.3—Total value of farmland and buildings, by State, 1989-96¹

State	1989	1990	1991	1992	1993	1994	1995	1996
	<i>Million dollars</i>							
Northeast	45,461	45,598	46,551	47,978	50,248	54,511	55,983	57,240
Maine	1,517	1,556	1,501	1,467	1,582	1,675	1,681	1,730
New Hampshire	1,036	998	965	925	993	1,082	1,094	1,109
Vermont	1,778	1,817	1,785	1,749	1,919	2,048	2,026	2,070
Massachusetts	2,592	2,705	2,710	2,734	2,988	3,203	3,077	3,190
Rhode Island	386	389	371	355	397	433	438	454
Connecticut	2,075	2,114	2,166	2,149	2,384	2,533	2,495	2,588
New York	8,778	8,518	9,089	9,340	10,020	10,925	10,628	10,266
New Jersey	4,353	4,780	5,580	5,905	6,040	6,370	6,844	6,865
Pennsylvania	15,875	15,625	15,690	16,584	16,242	17,528	18,013	19,292
Delaware	1,243	1,328	1,309	1,205	1,280	1,431	1,533	1,643
Maryland	5,828	5,767	5,387	5,566	6,404	7,282	8,155	8,034
Lake States	47,898	49,252	53,016	53,256	54,946	56,487	60,130	64,399
Michigan	10,616	10,854	11,729	11,948	12,102	12,985	14,219	15,579
Wisconsin	14,872	14,098	14,858	14,965	15,818	16,367	18,004	19,741
Minnesota	22,410	24,300	26,430	26,343	27,027	27,135	27,907	29,079
Corn Belt	137,982	138,026	142,588	146,624	151,684	163,227	177,204	192,996
Ohio	20,379	19,859	20,507	21,359	22,131	24,212	27,359	30,033
Indiana	20,484	20,440	20,656	21,200	22,320	24,061	26,302	28,642
Illinois	39,644	39,902	41,290	43,315	43,499	47,588	52,346	58,000
Iowa	36,683	36,515	38,157	38,510	40,360	42,532	44,786	47,876
Missouri	20,794	21,310	21,979	22,240	23,375	24,835	26,411	28,445
Northern Plains	69,550	72,127	72,423	71,827	71,941	77,456	81,994	85,567
North Dakota	12,839	13,001	13,615	12,847	13,534	14,278	15,041	15,417
South Dakota	12,094	12,891	12,951	12,641	12,067	12,658	13,306	14,038
Nebraska	24,068	24,680	24,351	24,351	24,209	26,485	28,074	29,695
Kansas	20,549	21,555	21,507	21,988	22,131	24,035	25,573	26,417
Appalachian	54,595	57,119	55,741	58,840	62,247	63,737	68,225	75,536
Virginia	12,573	14,819	13,112	14,294	14,070	14,534	15,232	16,557
West Virginia	2,705	2,457	2,605	3,119	3,141	3,217	3,368	3,570
North Carolina	13,640	13,144	13,267	13,823	14,786	14,965	16,092	18,120
Kentucky	12,922	13,790	13,508	13,931	15,186	16,021	17,498	19,283
Tennessee	12,755	12,911	13,250	13,673	15,065	15,000	16,035	18,006
Southeast	48,259	50,297	49,741	48,912	50,522	53,796	57,560	60,188
South Carolina	5,247	5,257	5,782	5,990	5,856	6,141	6,749	6,816
Georgia	12,978	13,488	13,250	12,403	13,685	13,959	15,076	16,025
Florida	21,056	22,563	22,155	21,347	20,981	22,303	22,860	23,752
Alabama	8,978	8,989	8,554	9,173	10,000	11,393	12,875	13,594
Delta	30,839	30,139	30,936	30,177	31,769	33,095	35,378	36,627
Mississippi	9,536	9,568	9,805	9,651	9,946	10,701	11,432	11,557
Arkansas	12,576	12,338	13,036	12,470	13,464	13,992	14,747	14,836
Louisiana	8,727	8,233	8,096	8,056	8,359	8,402	9,199	10,234
Southern Plains	85,866	83,127	80,979	79,828	81,734	84,969	89,578	90,503
Oklahoma	17,094	16,203	15,741	16,388	16,864	17,572	18,609	18,609
Texas	68,772	66,924	65,238	63,440	64,870	67,396	70,968	71,894
Mountain	63,075	64,372	68,463	68,259	69,791	76,501	82,908	90,773
Montana	12,241	13,431	13,206	13,140	13,575	15,165	16,529	17,273
Idaho	8,124	9,015	8,829	9,180	9,207	10,450	11,286	12,223
Wyoming	5,011	5,309	5,517	5,017	5,501	6,211	6,633	7,118
Colorado	12,563	12,379	14,334	13,120	13,973	15,658	17,020	18,150
New Mexico	8,233	8,233	9,303	9,370	8,575	9,184	9,883	11,287
Arizona	9,936	9,665	10,418	11,072	11,218	11,522	12,282	14,125
Utah	4,814	4,497	4,712	5,029	5,499	5,957	6,731	7,671
Nevada	2,154	1,842	2,145	2,332	2,243	2,355	2,543	2,925
Pacific	76,497	81,363	87,603	89,844	92,265	95,438	98,057	105,882
Washington	12,432	13,136	13,824	14,080	14,272	16,194	16,825	17,538
Oregon	9,541	10,199	10,431	10,623	11,603	13,076	14,776	16,239
California	54,525	58,027	63,349	65,141	66,390	66,169	66,456	72,105
48 States	660,022	671,419	688,042	695,545	717,147	759,217	807,017	859,711

¹ Value data as of Feb. 1, 1989, and Jan. 1 for 1990-96.

Source: USDA, ERS, based on Agricultural Land Value Survey, June Agricultural Survey; and 1992 Census of Agriculture data.

Table 1.4.4—Average per-farm value of farmland and buildings, by State, 1989-96¹

State	1989	1990	1991	1992	1993	1994	1995	1996
	<i>Dollars</i>							
Northeast	307,024	314,162	321,043	331,340	354,360	390,480	405,088	415,086
Maine	207,767	216,090	211,400	200,940	216,712	220,409	221,195	233,834
New Hampshire	345,460	369,763	357,541	342,711	397,056	450,824	475,600	461,905
Vermont	269,348	279,582	278,850	273,264	299,853	330,305	337,675	345,057
Massachusetts	398,800	422,700	423,380	427,219	481,900	533,882	512,767	514,586
Rhode Island	501,425	526,324	529,791	506,430	567,360	618,422	625,225	648,358
Connecticut	518,650	542,015	555,477	537,203	627,263	666,624	656,676	680,973
New York	225,077	221,236	239,171	245,784	267,192	303,484	295,209	285,172
New Jersey	524,501	590,096	656,480	656,089	678,600	715,744	760,423	746,167
Pennsylvania	293,985	294,809	296,032	318,923	318,478	343,691	360,259	385,837
Delaware	414,190	458,069	451,241	446,215	512,088	572,514	613,163	657,015
Maryland	373,603	379,391	349,773	356,795	426,947	502,178	570,305	586,407
Lake States	211,940	220,859	239,893	240,977	252,047	261,516	272,081	294,059
Michigan	193,025	201,000	217,200	221,262	232,725	249,714	263,309	293,942
Wisconsin	183,605	176,220	188,070	189,424	200,222	207,180	225,049	249,884
Minnesota	249,000	273,034	300,341	299,355	310,655	319,237	320,772	334,244
Corn Belt	302,592	309,476	326,288	337,844	356,067	387,713	423,934	470,722
Ohio	239,748	239,263	256,331	273,831	291,200	322,820	369,717	417,123
Indiana	288,501	300,591	317,785	326,154	354,286	381,920	424,220	477,375
Illinois	460,971	480,747	503,533	534,756	550,618	618,022	679,824	763,156
Iowa	349,357	351,106	370,451	373,885	395,682	421,109	447,862	488,535
Missouri	190,767	197,319	205,413	207,852	220,517	236,524	251,533	273,506
Northern Plains	357,581	370,834	375,250	376,058	384,713	416,430	438,470	461,278
North Dakota	383,239	388,075	412,570	389,309	416,431	446,199	470,020	497,311
South Dakota	345,540	368,323	370,017	361,177	349,757	372,290	403,219	431,940
Nebraska	422,247	432,989	434,834	434,834	440,171	481,547	501,325	530,276
Kansas	297,813	312,391	311,697	328,179	340,483	369,765	387,469	400,255
Appalachian	172,223	185,152	185,187	195,480	208,185	215,326	231,270	256,925
Virginia	267,511	322,141	291,378	317,647	312,658	315,954	324,075	344,931
West Virginia	128,795	119,844	130,240	155,955	157,065	160,835	168,394	178,497
North Carolina	209,846	211,992	221,120	230,375	250,614	258,024	277,456	312,415
Kentucky	136,021	148,277	148,437	153,086	166,876	180,010	196,607	219,123
Tennessee	143,316	148,399	155,876	160,859	179,339	180,720	197,960	225,081
Southeast	298,819	312,402	317,831	314,548	325,947	351,607	376,209	402,593
South Carolina	205,765	210,288	236,016	244,506	243,981	266,992	306,795	317,038
Georgia	270,375	280,990	288,033	269,620	297,502	310,196	335,011	372,675
Florida	513,561	550,317	553,875	547,346	537,977	571,869	586,166	593,801
Alabama	191,026	191,255	185,948	199,409	217,391	247,683	273,926	302,095
Delta	250,721	253,265	266,692	267,052	281,140	298,156	315,878	321,293
Mississippi	232,588	239,200	245,120	247,467	255,015	274,397	272,195	262,662
Arkansas	261,994	262,511	283,380	277,100	299,200	318,006	342,965	345,022
Louisiana	256,674	257,266	269,867	277,800	288,248	300,056	340,694	379,048
Southern Plains	325,250	312,508	303,292	296,758	302,159	314,699	328,123	326,727
Oklahoma	244,200	231,471	224,871	230,817	239,206	251,033	262,099	258,459
Texas	354,495	341,449	331,157	320,404	324,350	336,982	351,329	350,704
Mountain	524,751	541,394	580,198	584,913	605,296	672,239	724,091	792,774
Montana	495,595	543,765	534,644	540,741	570,361	673,981	751,336	785,146
Idaho	367,606	413,514	412,570	437,143	449,122	509,753	524,927	555,576
Wyoming	563,056	596,528	613,033	545,326	597,978	675,117	721,025	782,162
Colorado	465,278	467,147	551,292	514,510	547,953	618,875	680,790	740,837
New Mexico	588,036	609,815	689,111	694,104	635,170	680,267	732,042	836,108
Arizona	1,242,000	1,239,154	1,370,763	1,476,213	1,515,946	1,557,026	1,659,790	1,883,308
Utah	370,292	340,712	354,293	380,947	423,015	458,228	502,341	572,487
Nevada	861,520	736,920	857,960	932,720	934,500	981,288	1,017,399	1,170,009
Pacific	481,116	513,329	557,983	574,082	605,013	623,780	634,676	676,560
Washington	327,158	355,027	373,622	380,541	396,444	449,821	467,364	487,162
Oregon	257,859	279,436	281,914	283,267	309,400	344,106	383,790	421,785
California	649,102	682,673	763,235	794,407	840,380	837,578	830,705	879,332
48 States	304,260	313,668	325,855	330,818	345,098	368,659	390,581	417,761

¹ Value data as of Feb. 1, 1989, and Jan. 1, for 1990-96. Average per-farm value is estimated by dividing total value of farm real estate by the number of farms.

Source: USDA, ERS, based on Agricultural Land Value Survey, June Agricultural Survey; and 1992 Census of Agriculture data.

Table 1.4.5—Cropland rented for cash: average gross cash rent per acre and rent as a percent of value, selected States, 1992-96

State and land type ²	Rent per acre						Rent to value ¹					
	ALVS ³	ALVS	ALVS	JAS ⁴	ALVS	JAS	ALVS	ALVS	ALVS	JAS	JAS	JAS
	1992	1993	1994	1994	1995	1996	1992	1993	1994	1994	1995	1996
	<i>Dollars</i>						<i>Percent</i>					
Northeast:												
New England ⁵	na	na	na	31.50	35.20	30.70	na	na	na	.7	.7	1.0
New York	36.20	34.90	38.20	25.10	25.10	29.00	4.5	3.9	3.8	2.4	2.2	2.9
New Jersey	52.00	50.60	71.10	42.90	45.40	44.80	0.5	0.8	1.3	0.4	0.6	.4
Pennsylvania	42.40	44.10	41.90	37.70	38.80	38.50	1.8	2.0	1.5	1.4	1.5	1.3
Delaware	62.30	57.90	59.80	54.90	61.10	64.30	3.3	2.6	2.8	2.4	2.5	2.7
Maryland	*	55.40	60.80	41.40	44.70	48.00	*	2.3	2.2	1.3	1.6	1.6
Lake States:												
Michigan	47.40	45.60	49.00	48.00	49.70	52.20	6.2	5.7	5.5	4.8	4.9	4.3
Wisconsin	51.40	52.50	51.20	48.70	46.20	48.50	7.3	6.9	6.8	5.6	4.9	4.6
Minnesota	62.30	64.20	61.90	66.00	70.10	73.80	7.6	7.6	7.9	6.8	6.5	6.4
Corn Belt:												
Ohio	70.20	68.50	70.50	64.50	67.10	70.80	5.6	5.5	4.7	3.8	3.5	2.7
Indiana	85.70	88.30	90.40	83.40	88.40	94.80	7.5	6.8	6.3	5.7	5.6	5.2
Illinois	103.30	102.90	107.30	99.50	99.70	106.00	6.5	6.3	5.5	4.2	4.9	4.6
Iowa	104.60	108.00	107.00	98.60	99.60	105.00	8.0	7.9	7.4	6.5	6.3	5.8
Missouri	-All cropland	58.20	64.10	64.80	na	na	8.0	8.9	8.6	na	na	na
	-Nonirrigated	na	na	na	55.10	51.10	na	na	na	4.2	4.2	3.8
Northern Plains:												
N. Dakota	29.10	31.30	31.90	32.90	33.10	34.00	8.7	8.5	8.2	7.0	7.1	7.2
S. Dakota	-All cropland	30.40	30.50	32.20	na	na	8.3	8.0	8.2	na	na	na
	-Nonirrigated	na	na	na	30.00	30.20	na	na	na	6.6	6.9	6.9
Nebraska	-Nonirrigated	49.60	50.30	50.30	56.70	57.20	8.6	8.6	8.3	8.2	7.7	6.5
	-Irrigated	102.80	102.20	106.80	108.40	111.10	9.5	9.3	9.3	8.5	8.4	7.5
Kansas	-Nonirrigated	31.90	32.80	34.70	32.60	35.50	7.2	7.4	7.3	6.5	5.9	5.8
	-Irrigated	62.70	65.10	72.50	*	*	9.5	9.3	10.1	*	*	*
Appalachian:												
Virginia	34.40	33.80	37.40	35.80	35.70	37.70	2.1	2.4	2.4	2.2	1.9	2.0
West Virginia	30.40	30.10	36.90	31.00	30.00	32.00	3.4	3.5	4.3	2.7	2.3	2.1
North Carolina	37.70	41.00	38.10	32.50	33.60	39.00	2.8	2.8	2.5	2.2	2.0	2.2
Kentucky	52.60	55.30	59.00	49.10	52.80	64.00	5.4	5.2	5.7	4.4	3.8	4.9
Tennessee	48.80	50.20	49.50	46.70	43.00	48.30	5.1	4.8	5.8	3.6	3.1	3.0
Southeast:												
S. Carolina	21.70	22.50	23.40	23.90	23.50	23.80	2.5	2.8	2.6	2.6	2.5	2.5
Georgia	-All cropland	29.70	30.50	32.00	na	na	3.5	3.2	3.5	na	na	na
	-Nonirrigated	na	na	na	28.70	32.90	na	na	na	3.9	4.2	4.4
	-Irrigated	na	na	na	56.10	60.80	na	na	na	5.3	6.1	5.2
Florida	-All cropland	101.50	95.70	73.10	na	na	3.0	3.5	1.9	na	na	na
	-Nonirrigated	na	na	na	20.80	22.50	na	na	na	2.0	2.8	2.8
	-Irrigated	na	na	na	136.30	183.50	na	na	na	1.8	1.7	*
Alabama	28.10	30.70	36.50	31.60	36.20	42.20	4.1	4.3	4.8	2.8	3.4	4.0
Delta States:												
Mississippi	-All cropland	40.80	39.60	44.00	na	na	6.7	6.4	6.7	na	na	na
	-Nonirrigated	na	na	na	44.30	41.60	na	na	na	5.7	5.5	5.4
	-Irrigated	na	na	na	59.90	70.00	na	na	na	6.6	7.3	7.9
Arkansas	-All cropland	48.00	50.10	50.70	na	na	7.3	7.2	6.3	na	na	na
	-Nonirrigated	na	na	na	46.90	48.40	na	na	na	6.5	6.8	5.6
	-Irrigated	na	na	na	68.10	58.70	na	na	na	6.8	6.4	*
Louisiana	-All land	48.30	46.80	48.30	na	na	6.1	5.6	6.0	na	na	na
	-Nonirrigated	na	na	na	47.90	55.30	na	na	na	5.9	5.7	5.7
	-Irrigated	na	na	na	78.90	77.60	na	na	na	8.9	8.2	6.9
Southern Plains:												
Oklahoma	-Nonirrigated	26.10	26.20	25.20	25.50	25.10	5.6	5.5	5.1	4.5	4.0	4.7
	-Irrigated	39.10	39.10	41.70	*	*	5.9	6.4	6.9	*	*	*
Texas	-Nonirrigated	20.00	20.60	20.20	17.60	17.00	3.3	3.5	3.2	2.6	2.1	2.1
	-Irrigated	45.30	49.40	44.90	58.50	53.80	7.3	7.6	6.3	5.7	5.6	4.6

Continued--

Table 1.4.5—Cropland rented for cash: average gross cash rent per acre and rent as a percent of value, selected States, 1992-96—continued

State and land type ²	Rent per acre						Rent to value ¹						
	ALVS ³	ALVS	ALVS	JAS ⁴	JAS	JAS	ALVS	ALVS	ALVS	JAS	JAS	JAS	
	1992	1993	1994	1994	1995	1996	1992	1993	1994	1994	1995	1996	
<i>Dollars</i>						<i>Percent</i>							
Mountain:													
Montana	-Nonirrigated	19.80	21.00	24.10	15.20	15.30	19.0	8.3	7.8	8.4	5.1	5.1	5.3
	-Irrigated	50.60	54.80	49.70	*	*	*	5.0	5.5	7.3	*	*	*
Idaho	-Nonirrigated	33.90	34.30	47.80	*	*	44.10	5.6	6.4	7.6	*	*	6.5
	-Irrigated	114.30	100.50	126.60	99.50	112.30	113.00	9.9	7.1	8.9	6.9	7.4	6.6
Wyoming	-Nonirrigated	9.60	13.40	16.10	*	*	*	5.7	6.7	6.3	*	*	*
	-Irrigated	49.40	54.00	51.20	*	*	*	8.7	8.2	7.7	*	*	*
Colorado	-Nonirrigated	20.40	24.80	28.80	*	*	*	5.6	7.6	8.8	*	*	*
	-Irrigated	72.70	76.20	75.50	*	*	*	7.2	7.1	7.8	*	*	*
New Mexico	-Irrigated	87.70	80.40	88.90	77.70	88.00	*	2.6	2.5	1.8	4.2	4.6	*
Arizona	-All land	na	na	na	80.60	87.40	94.60	na	na	na	3.0	2.8	2.2
	-Irrigated	128.10	136.70	150.10	na	na	na	3.8	3.6	3.0	na	na	na
Utah	-Nonirrigated	30.50	26.30	28.20	*	*	*	3.8	3.3	3.6	*	*	*
	-Irrigated	57.60	52.90	54.00	51.40	50.90	60.00	3.4	3.0	2.5	1.5	1.4	1.4
Nevada	-Irrigated	92.70	89.10	81.70	*	*	*	4.8	6.2	3.2	*	*	*
Pacific:													
Washington	-Nonirrigated	49.80	53.40	55.90	69.50	70.80	*	5.5	5.4	6.7	4.1	4.6	*
	-Irrigated	113.10	124.20	133.20	127.90	137.80	138.00	5.7	6.3	6.1	6.5	7.1	4.6
Oregon	-Nonirrigated	58.20	55.50	61.90	59.10	66.00	65.80	6.0	5.6	4.2	4.2	4.6	3.7
	-Irrigated	106.70	124.70	135.90	125.50	130.00	115.00	6.1	7.8	7.4	5.2	5.8	4.9
California	-Irrigated	179.60	191.50	223.00	176.00	189.60	210.00	3.4	3.6	4.4	4.4	4.6	3.6

* = Insufficient information; na = data not available.

¹ Cash rent as a percent of per acre value of rented cropland.

² Unless otherwise specified as irrigated or nonirrigated, data are for all cropland.

³ ALVS is "Agricultural Land Values Survey."

⁴ JAS is "June Agricultural Survey."

⁵ Combines 6 States.

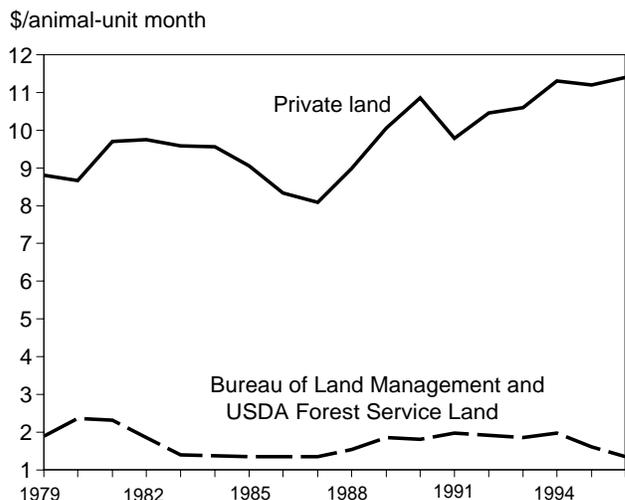
Source: USDA, ERS, based on ALVS and JAS data.

Grazing Fees

Grazing fees for use of pasture or rangeland are also a form of cash rent, except that payment is based on "grazing units" rather than tracts of land (acres). A grazing unit is defined on an animal-unit-month (AUM) basis, which is one cow (or an equivalent in terms of other livestock types) for 1 month. Grazing fees on privately owned nonirrigated land in 16 selected States averaged \$11.40 per AUM in 1996, a 1.8-percent increase over 1995 (table 1.4.7). Fees ranged from \$18 per AUM in Nebraska to \$6.50 in Arizona. Private grazing fees have been relatively stable over the last decade (fig. 1.4.3).

Grazing fees on public lands administered by the Bureau of Land Management (BLM) of the Department of the Interior, and the Forest Service (FS) of the Department of Agriculture are set by law. The fees vary annually according to a legislated formula, which attempts to set the fees according to changes in the cost of production. As a result of the

Figure 1.4.3--Average grazing fees on private and public lands, 1979-96



Sources: USDA, ERS, based on NASS and USDI data.

Table 1.4.6—Pasture rented for cash: average gross cash rent per acre and rent as a percent of value, selected States, 1992-96

State	Rent per acre						Rent to value ¹					
	ALVS ² 1992	ALVS 1993	ALVS 1994	JAS ³ 1994	JAS 1995	JAS 1996	ALVS 1992	ALVS 1993	ALVS 1994	JAS 1994	JAS 1995	JAS 1996
	<i>Dollars</i>						<i>Percent</i>					
Northeast:												
New England ⁴	na	na	na	20.60	20.90	*	na	na	na	1.1	1.1	*
New York	19.90	17.00	17.60	14.70	14.50	14.50	4.2	2.2	2.8	2.3	2.7	2.2
New Jersey	*	27.10	*	*	*	*	*	0.5	*	*	*	*
Pennsylvania	21.80	25.40	20.70	20.70	29.80	37.00	1.5	2.0	1.1	2.1	1.9	2.3
Maryland	31.90	31.50	32.40	33.50	*	*	2.1	2.5	1.3	1.4	*	*
Lake States:												
Michigan	19.60	21.50	22.10	*	*	*	4.2	4.2	3.5	*	*	*
Wisconsin	25.60	24.90	22.50	25.50	31.40	40.00	7.6	7.2	6.6	4.3	5.8	5.8
Minnesota	18.60	19.60	22.30	16.20	16.50	16.00	6.3	5.7	7.5	5.3	5.1	4.8
Corn Belt:												
Ohio	26.50	25.60	25.50	*	*	*	4.3	3.4	3.3	*	*	*
Indiana	35.00	35.90	32.90	*	*	*	6.1	5.7	4.5	*	*	*
Illinois	34.90	31.80	34.60	31.00	27.65	29.40	5.6	5.2	5.2	5.6	4.0	4.1
Iowa	33.60	36.10	36.40	26.35	28.05	28.90	7.3	7.0	7.2	5.5	6.2	5.0
Missouri	23.70	22.60	24.70	18.50	16.40	20.00	5.4	4.7	5.1	2.6	2.7	2.8
Northern Plains:												
North Dakota	9.20	9.10	9.70	8.30	8.00	8.50	7.1	6.8	6.7	5.9	4.9	6.3
South Dakota	8.20	7.80	8.90	9.70	8.50	9.10	7.4	6.3	6.8	6.0	5.5	6.5
Nebraska	11.80	11.30	11.10	10.20	9.20	10.00	7.4	6.9	5.9	6.1	5.4	5.8
Kansas	12.00	12.80	12.80	12.20	11.70	11.90	5.0	5.1	4.8	3.7	4.1	3.8
Appalachian:												
Virginia	22.60	20.20	19.40	14.80	14.00 ⁶	13.80	2.2	1.9	1.7	1.2	1.1 ⁶	0.7
West Virginia	14.70	16.70	17.60	17.00	14.00	*	1.9	1.9	3.3	3.0	2.2	*
North Carolina	21.30	23.20	23.00	16.90	17.00 ⁶	22.20	2.1	1.8	1.9	0.9	1.0 ⁶	1.1
Kentucky	25.90	24.50	26.20	*	*	*	3.3	3.3	3.3	*	*	*
Tennessee	23.50	25.80	31.90	15.20	14.30	13.50	2.9	3.3	4.4	0.8	0.7	0.8
Southeast:												
South Carolina	15.30	16.40	18.80	*	16.11	*	2.2	1.8	2.2	*	1.7	*
Georgia	19.70	21.10	23.00	20.00	19.20	23.20	2.6	2.2	2.3	1.4	1.4	1.9
Florida	21.40	21.00	17.00	17.00	19.50	17.40	0.8	0.8	1.2	.7	.8	0.6
Alabama	18.80	19.40	19.10	13.10	12.50	15.80	3.2	3.6	3.1	2.4	2.0	1.9
Delta States:												
Mississippi	14.90	15.00	14.90	15.90	13.00	15.60	3.4	3.1	2.8	2.5	2.0	2.6
Arkansas	18.60	19.90	18.00	20.90	15.60	*	4.0	4.9	3.5	2.0	1.2	*
Louisiana	17.20	14.50	15.60	13.00	12.60	12.60	2.7	2.1	2.3	0.9	0.8	0.7
Southern Plains:												
Oklahoma	10.20	9.40	9.60	9.40	9.20	8.00	3.4	3.0	3.1	3.2	3.1	3.3
Texas	6.90	7.00	7.30	5.00	4.80	5.40	1.8	1.6	1.5	1.2	1.4	1.1
Mountain: ⁵												
Montana	6.60	8.10	6.20	5.50	5.10	7.20	5.5	5.8	4.7	4.7	3.9	4.3
Idaho	26.50	19.10	23.10	28.20	29.30	*	6.1	6.3	5.7	4.9	4.5	*
Wyoming	3.60	4.20	5.80	3.10	3.50	*	3.6	3.8	3.9	2.5	2.9	*
Colorado	6.80	10.90	11.50	*	*	*	3.2	5.1	5.3	*	*	*
New Mexico	na	na	na	1.60	1.80	*	na	na	na	1.5	1.5	*
Utah	25.70	23.00	20.90	16.30	13.70	*	3.5	3.2	1.9	0.9	0.7	*
Pacific:												
Washington	21.90	29.80	25.10	*	*	*	4.0	4.2	3.1	*	*	*
Oregon	22.60	25.40	21.50	*	*	*	4.0	6.0	6.8	*	*	*
California	37.90	34.20	44.90	26.90	39.30	*	2.2	1.8	1.6	1.6	2.5	*

na = data not available; * = insufficient information. ¹ Cash rent as a percent of per acre value of rented pasture. ² ALVS is Agricultural Land Values Survey. ³ JAS is June Agricultural Survey. ⁴ Combines 6 States. ⁵ Insufficient data gathered to estimate rents for Arizona and Nevada. ⁶ Revisions of previously published estimate.

Source: USDA, ERS, based on Agricultural Land Value Survey and June Agricultural Survey data.

Table 1.4.7—Cattle grazing rates on privately owned nonirrigated land, 1982-96

State	1982	1987	1990	1991	1992	1993	1994	1995	1996
<i>Dollars per animal-unit month¹</i>									
Northern Plains:									
North Dakota	8.34	7.41	8.52	8.93	10.04	10.00	9.75	10.30	10.60
South Dakota	11.09	8.61	12.53	12.74	12.44	12.60	13.20	13.90	13.20
Nebraska	13.80	10.29	15.78	14.83	14.83	17.00	17.50	17.60	18.00
Kansas	9.59	8.87	10.58	11.10	10.99	11.30	11.00	10.50	12.00
Southern Plains:									
Oklahoma	6.29	5.68	4.31 ²	7.23	6.58 ²	7.10	6.20	7.00	7.00
Texas	8.06	8.30	7.61 ²	8.60 ²	8.92	8.75	8.75	9.10	8.00
Mountain:									
Montana	8.90	7.94	9.61	10.58	11.86	11.40	11.80	11.90	11.80
Idaho	7.98	6.60	8.42	10.18	9.49	9.25	9.70	10.10	10.20
Wyoming	8.46	6.31	9.64	9.98	9.93	10.50	10.50	11.30	11.00
Colorado	9.04	8.27	10.20	9.30	10.11	9.70	10.20	10.30	11.40
New Mexico	6.26	5.82	6.66	3.02 ²	6.95	7.55	8.08	8.74	8.87
Arizona	*	7.19	*	*	5.53	5.72	5.72	5.75	6.50
Utah	9.29	5.98	7.79	9.64	9.79	8.90	9.00	9.50	9.75
Nevada	5.70	7.31	*	9.45	10.26	8.80	8.80	8.80	8.80
Pacific:									
Washington	6.67	9.55	7.82	7.81	10.69	7.80	8.30	8.50	8.70
Oregon	7.70	5.91	8.28	8.93	9.28	9.75	9.00	10.20	10.00
California	9.23	8.46	9.81 ²	9.61	10.09	10.40	11.00	10.50	10.10
16-State average ³	9.75	8.09	10.86	9.78	10.46	10.60	11.30	11.20	11.40

¹ Includes cow-calf rates converted to animal-unit month rates.

² Coefficient of variation exceeds 15 percent.

³ All States except Texas.

* Insufficient number of reports for an accurate estimate of grazing rates.

Source: USDA, ERS, based on USDA, 1993b; and on USDA, NASS, *Agricultural Prices*.

formula, grazing fees on public land were lowered 16 percent in January 1996, reflecting lower market prices for livestock and increased production costs. The new fees, which took effect March 1, were set at \$1.35 per AUM, 26 cents less than in 1995. (For more on grazing issues, see chapter 1.1, *Land Use*.)

Agricultural Real Estate Taxes

USDA's agricultural real estate tax estimates are used as components in its prices-paid indexes for commodities and services, interest, taxes, and farm wages. Property taxes on farm real estate are a direct cost to landowners, but when farmland is cash-rented, those taxes are passed on to tenants through rents paid, and thus agricultural real estate taxes become a significant cost of production faced by all farm operators. Agricultural real estate taxes are a principal source of funding for State and local governments.

Taxes levied on U.S. agricultural real estate (land and buildings) by State and local governments totaled \$4.9 billion in 1994 (the most recent year for which data are available), 2 percent less than a year earlier (table 1.4.8). The U.S. average tax per acre was \$5.86, down from \$5.98 in 1993. The average tax per

\$100 of full market value on U.S. agricultural real estate declined from \$0.85 in 1993 to \$0.75 in 1994 (fig. 1.4.4, table 1.4.8). Agricultural real estate taxes include all ad-valorem taxes (meaning based on value) after allowing for preferential assessments and any old age, homestead, or veterans' exemptions (excluded are levies based on benefits received, such as irrigation and drainage improvements).

Compared with 1993, taxes per acre in 1994 averaged higher in 33 States, lower in 10, and unchanged in 6. Taxes per \$100 of full market value in 1994 were higher in 4 States, lower in 39, and unchanged in 6. Taxes varied widely among the States, ranging in 1994 from 40 cents per acre in New Mexico to \$56.75 in Rhode Island. Taxes per \$100 of full market value ranged from 8 cents in Delaware to \$2.00 in Wisconsin. Total and per-acre taxes levied in Michigan declined by 51 percent, reflecting an extensive restructuring of that State's tax system. If, instead, Michigan agricultural real estate taxes had not changed (i.e., zero percent change), then U.S. total and per-acre taxes levied would have shown increases rather than decreases.

Table 1.4.8—Taxes levied on agricultural real estate, by State, 1992-94

State	Total taxes			Average tax per acre			Taxes per \$100 of full market value		
	1992	1993	1994	1992	1993	1994	1992	1993	1994
	<i>Million dollars</i>			<i>Dollars</i>			<i>Dollars</i>		
Alabama	10.9	11.1	11.4	1.32	1.32	1.32	0.16	0.15	0.14
Arizona	49.2	50.7	50.5	5.85	6.02	6.02	1.94	1.97	1.92
Arkansas	38.0	38.6	38.5	2.76	2.83	2.86	0.38	0.37	0.36
California	314.1	338.7	344.4	12.87	13.93	14.21	0.73	0.81	0.83
Colorado	81.2	83.2	89.5	2.83	2.90	3.13	0.77	0.76	0.73
Connecticut	10.0	9.9	9.9	27.46	27.85	28.69	0.68	0.65	0.61
Delaware	1.2	1.2	1.2	2.17	2.24	2.17	0.10	0.09	0.08
Florida	143.8	140.7	130.8	14.75	14.71	13.68	0.72	0.71	0.62
Georgia	53.4	52.4	53.5	5.39	5.29	5.40	0.60	0.55	0.55
Hawaii	42.3	42.9	41.6	24.92	25.33	24.59	0.69	0.74	0.75
Idaho	40.4	39.8	39.7	3.64	3.58	3.58	0.53	0.52	0.46
Illinois	428.6	431.2	465.7	15.18	15.32	16.55	1.01	1.02	1.01
Indiana	131.0	138.6	142.8	8.23	8.71	8.97	0.63	0.64	0.61
Iowa	350.2	358.9	350.6	11.13	11.44	11.21	0.95	0.92	0.85
Kansas	102.7	107.1	111.5	2.22	2.32	2.41	0.46	0.47	0.45
Kentucky	41.6	43.6	44.0	3.04	3.19	3.22	0.31	0.29	0.28
Louisiana	19.4	18.2	17.8	2.61	2.48	2.48	0.29	0.26	0.26
Maine	13.5	13.7	13.9	10.37	10.77	11.31	1.11	1.09	1.05
Maryland	22.7	23.8	24.7	10.64	11.14	11.59	0.47	0.44	0.40
Massachusetts	15.3	14.7	14.9	26.31	26.87	27.68	0.77	0.73	0.69
Michigan ¹	359.5	359.4	176.1	35.65	35.97	17.63	3.23	3.18	1.45
Minnesota	196.1	198.2	206.2	7.45	7.56	7.86	0.85	0.84	0.87
Mississippi	22.7	22.3	22.5	2.33	2.29	2.31	0.32	0.30	0.28
Missouri	75.9	78.4	79.7	2.63	2.73	2.78	0.38	0.38	0.37
Montana	80.5	86.1	71.4	1.66	1.78	1.48	0.66	0.66	0.49
Nebraska	352.8	398.0	426.0	8.06	9.10	9.74	1.42	1.57	1.53
Nevada	4.1	4.1	4.1	0.78	0.76	0.78	0.34	0.36	0.34
New Hampshire	8.3	9.2	9.6	21.18	23.80	24.99	1.04	1.09	1.05
New Jersey	35.0	36.0	36.6	40.83	42.40	43.67	0.86	0.93	0.90
New Mexico	12.5	12.5	12.2	0.41	0.41	0.40	0.17	0.18	0.17
New York	165.4	160.3	156.3	20.98	20.33	20.33	2.00	1.82	1.63
North Carolina	58.5	59.8	60.3	6.90	7.12	7.26	0.55	0.54	0.54
North Dakota	87.0	90.2	92.1	2.33	2.42	2.47	0.65	0.62	0.60
Ohio	155.9	167.0	175.4	10.52	11.42	11.99	0.84	0.90	0.87
Oklahoma	63.6	64.6	65.1	2.04	2.07	2.09	0.41	0.41	0.39
Oregon	86.2	77.8	70.7	5.45	4.91	4.47	0.90	0.75	0.60
Pennsylvania	131.8	132.8	133.7	17.79	18.13	18.49	0.98	1.04	0.97
Rhode Island	2.9	3.0	2.9	54.38	58.51	56.75	1.18	1.20	1.06
South Carolina	19.5	19.8	20.2	4.23	4.33	4.42	0.45	0.50	0.48
South Dakota	133.4	152.0	139.9	3.61	4.11	3.78	0.99	1.11	0.98
Tennessee	52.3	53.2	52.7	4.50	4.65	4.65	0.46	0.44	0.44
Texas	367.5	379.3	391.4	2.93	3.02	3.14	0.63	0.64	0.64
Utah	11.7	12.1	12.6	1.66	1.74	1.83	0.39	0.38	0.36
Vermont	20.8	21.3	21.9	14.98	15.77	16.56	1.38	1.36	1.31
Virginia	59.0	61.7	63.5	7.15	7.57	7.80	0.52	0.58	0.58
Washington	72.3	74.2	77.0	5.63	5.78	6.07	0.71	0.74	0.68
West Virginia	4.6	4.5	5.0	1.37	1.34	1.49	0.19	0.19	0.21
Wisconsin	302.2	308.2	307.6	18.68	19.27	19.46	2.15	2.07	2.00
Wyoming	17.5	18.5	18.6	0.74	0.78	0.79	0.54	0.52	0.47
United States ²	4,869.2	5,023.3	4,908.6	5.78	5.98	5.86	0.84	0.85	0.75

¹ Change between 1993-94 reflects extensive restructuring of Michigan tax system.

² Excludes Alaska.

Source: USDA, ERS, based on Agricultural Real Estate Tax Survey data.

State variation in agricultural real estate tax rates is partly due to (1) the degree to which States rely on real estate taxes as a source of local revenue; (2) the extent to which States provide tax relief, such as use-value assessment, homestead and old-age exemptions, and veterans' preferences; and (3) taxpayer resistance to increasing real estate taxes. All States have laws on preferential (or deferred) land-use assessment of farmland (Aiken, 1990). These laws provide that farmland devoted to farming be assessed on the basis of its use as farmland and not according to its market value. For example, farm or ranch land in a developing urban area would be taxed as farm or ranch land and not at the market value for which the land might sell for, say, residential development. These laws are designed not only to reduce agricultural real estate taxes, but also to encourage the protection of farms and ranches for such aesthetic reasons as open space. Laws vary from State to State with respect to minimum acreage requirements, minimum number of years in farming, percentage of gross annual income the landowner receives from the land, and penalties for converting the land to a nonfarm use.

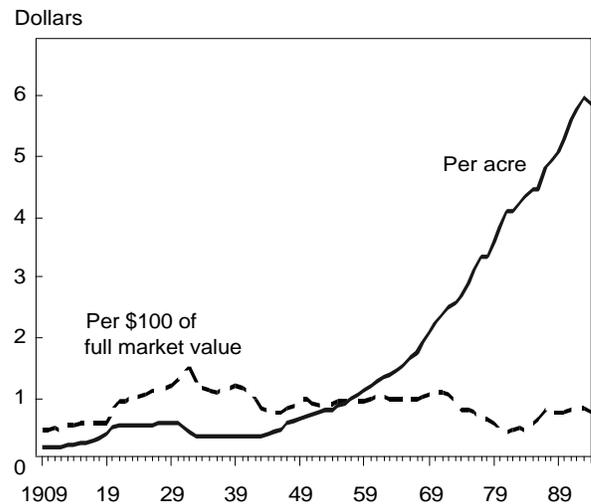
Factors Affecting Farm Real Estate Values

Farm real estate values are affected by many factors, both agricultural and nonagricultural. The net returns from agricultural use of farmland, for which cash rents are often used as a measure, are a principal determinant of farmland values. Farmland values are also influenced by capital investment in farm structures, nonfarm demand for farmland, interest rates, government commodity programs, and a myriad of lesser factors.

Building value currently accounts for about 22 percent of total U.S. farm real estate value, but the percentage varies across the United States. For instance, in Wisconsin, with substantial investment in capital-intensive dairy facilities, buildings account for 42 percent of farm real estate value. In arid regions of the West, buildings account for much less: in Arizona, for instance, building value is 10 percent of total real estate value. Building value as a percentage of farm real estate value also varies across time. Canning (1992) showed farm structures constituting as much as 31 percent (1940) of total U.S. farm real estate value and as little as 14 percent (1979). The interaction of inflation and income tax rates appears to be an important determinant of this relationship.

The potential to convert farmland to nonagricultural uses can increase the price of farmland well above its value in agricultural use. In heavily populated areas,

Figure 1.4.4--U.S. agricultural real estate taxes



Source: USDA, ERS, Agricultural Real Estate Tax Survey data.

especially, competing demands from nonagricultural uses can far outweigh agricultural productivity as a determinant of farmland value (Robison and Koenig, 1992). Some indication of the influence of urbanization can be gained by examining the rent-to-value ratios in table 1.4.5. In densely populated States along the East Coast, rent-to-value ratios are relatively low, indicating that cash rents (a measure of agricultural productivity) account for only a small proportion of the market value of farm real estate. In more rural States—the Plains, for example—cash rents account for much larger percentages of market value.

Interest rates, particularly real or inflation-adjusted rates, have been identified as particularly important determinants of U.S. farmland values during the post 1960's period (Gertel, 1990). During much of the mid- to late 1970's, real (inflation-adjusted) interest rates were actually negative, implying a strong incentive to borrow money, with much of the borrowed money used to purchase farmland. Conversely, real interest rates dramatically increased from 1981 to 1985 when nominal interest rates increased rapidly just as expectations of future inflation were decreasing. The resulting increase in the real mortgage interest rate has been attributed as a cause of the slide in farmland values in the early and mid-1980's (Gertel, 1988).

An array of government policies influence the income derived from farmland, and hence its value. Government commodity support programs are the most obvious, but also important are farm credit

programs, zoning regulations, habitat protection laws, infrastructure development (such as roads and dams), environmental regulations, and even property and income tax policy. Research has shown that commodity programs have increased farmland values relative to what they would have been in the absence of such programs (Featherstone and Baker, 1988; Herriges, Barickman, and Shogren, 1992). As government assumes a smaller role in the farm economy, analysts expect commodity support programs to be less important in the determination of farmland values. (See chapters 1.1, *Land Use*, and 1.2, *Land Tenure*, for discussion of land use and property rights issues affecting land values.)

The 1996 Farm Act, which phases out commodity support payments over 7 years, has raised concern that such changes will lower farmland values and, hence, the net worth and creditworthiness of farm businesses. Farm-dependent rural communities are concerned that reductions in government commodity support programs will adversely affect the finances of local governments, whose operating revenues are largely dependent on the *ad valorem* property tax. Reductions in farm returns, including government payments, could also have the secondary effect of reducing the incomes of some rural, nonfarm businesses.

Studies conducted by ERS concluded that farmland values could decline by as much as 15 percent if commodity programs abruptly ended (Shoemaker, Perry, and Beach, 1995). Because producers likely have been expecting some reduction in support programs for several years, farmland values in areas heavily dependent on program payments may have already adjusted, as farmers incorporated expectations of changing commodity programs and lower support payments into their assessment of future net returns. With time, producers can adjust capital and other inputs and make other changes to production practices that may mitigate any reduction in program payments. Given that the reduction is being phased in slowly, any remaining impact on farmland values should be small and the effect will probably be overshadowed by recent increases in grain prices.

A myriad of lesser factors contribute to spatial variation in farmland values, including site-specific characteristics of individual parcels. Among these are access to major highways and proximity to commodity and input markets. Nonfarm, but income-generating, uses of farmland are possible on some parcels, including fee-recreation and fee-hunting. Also, farmland value may be enhanced

by the attraction of farming as a lifestyle (farm occupation), an aesthetic location, or homesite potential. Inflation, interest rates, lending policies of farm credit agencies and banks, and speculation have also been identified as factors external to farmland markets that affect farmland values.

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Surveys for Collecting Data on Agricultural Land Values, Rents, and Taxes

In 1994, questions on land values and cash rents were added to the June Agricultural Survey (JAS) to replace the Agricultural Land Values Survey (ALVS) which had been used since 1984. The ALVS, as well as the Farmland Market Survey, were discontinued after 1994 in order to reduce respondent burden and data collection costs. The JAS, conducted by the National Agricultural Statistics Service (NASS), is a probability-based survey that divides the area of the United States into "segments" representative of national land uses. A representative sample of all land uses in the 48 contiguous States is obtained by selecting approximately 1 percent of all land in these States for inclusion in the JAS. Twenty percent of the segments are replaced each year. Within the selected segments, enumerators identify "tracts," which represent a particular farm operator's acreage within the segment. Farm operators then provide per acre estimates of value and cash rents for the farmland in their tract. In 1995, 14,603 segments were sampled. Within these segments, enumerators identified 119,012 tracts, of which 50,294 were classified as agricultural. Cash rental acres were identified in 17,565 tracts (35 percent of total agricultural tracts).

The JAS—with its area-frame design, probability basis, and personal interview format—is expected to more accurately portray average conditions in each State's farmland market than did the ALVS. There are several advantages to using JAS. First, JAS uses a much larger sample: approximately 50,000 observations, or about three times as many as the ALVS. Second, the random selection of area-based segments, with 80 percent resurveyed each year, is expected to enhance the statistical reliability of USDA estimates of both farmland values and cash rents. Third, respondents estimate the value or report the cash rent for land they operate within a specific land segment (usually about 1 square mile in area). Respondents to the ALVS, on the other hand, reported values and cash rents for a nonspecific "locality." And finally, most responses to the ALVS were obtained through telephone contacts, while JAS respondents are visited.

The 1-year overlap of the two surveys in 1994 allows a comparison of cash rent estimates. For most States, the two estimates are similar; for a few States, noticeable differences exist. Several factors associated with the change of survey instrument may have contributed to the differences, but these can be bridged by comparing the cash rent indicators from successive years on each survey.

Data on agricultural real estate taxes are obtained from a national survey of approximately 4,200 taxing jurisdictions. Each provides tax and acreage information for a sample of 10 farm or ranch parcels in its jurisdiction for the current and preceding years. Respondents in jurisdictions with fewer than 10 parcels are requested to provide information on all parcels in the jurisdiction. Taxes per \$100 of market value are derived by dividing the average per-acre tax by the average per-acre value of farm real estate. This data series, by State and Nation, dates from 1890 for taxes per acre and from 1909 for total taxes and taxes per \$100 of full market value.

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Recent ERS Reports on Land Values, Rents, and Taxes

Agricultural Income and Finance, Situation and Outlook (Annual Lender Issue), AIS-64, Feb. 1997 (Jerome Stam, ed.). This report discusses the financial conditions of commercial agricultural lenders during 1996. Focuses on the four major institutional farm lenders: commercial banks, the Farm Credit System, the Farm Services Agency, and life insurance companies. Financial institutions serving agriculture continued to experience improved conditions in 1996. In recent years, farm-debt-to-farm-income ratios have dropped and farm real estate value increases have led to significantly improved equity positions for many farmers.

"Farm Real Estate Values Continue To Increase," *Agricultural Outlook*, Dec. 1996 (David Westenbarger and Charles Barnard). Discusses changes in farmland values during 1995. U.S. farm real estate values as of January 1, 1996 averaged \$890 per acre—a record high—marking the 9th consecutive annual increase since 1987.

Agricultural Land Values, AREI Update, Dec. 1996, No. 15. (John Jones and David Westenbarger) This update reports ERS's annual estimates of farm real estate value for each of 48 States. U.S. farm real estate values averaged \$890 per acre as of January 1, 1996—7.0 percent above a year earlier.

Agricultural Cash Rents, AREI Update, June 1997, No. 2 (David Westenbarger, John Jones, and Charles Barnard). This update reports ERS's annual estimates of cash rents for selected States, 1991-95. Cash rents as percentages of market value are also presented. For selected States, estimates are provided for cropland, irrigated cropland, nonirrigated cropland, and pasture. Cash rents for cropland were generally higher in 1995 than in 1994, while those for pasture were generally lower.

"Commodity Payments and Farmland Values," *Agricultural Outlook*, June 1995 (Robin Shoemaker, Janet Perry, and Doug Beach). Includes a general discussion of the influences that agricultural commodity program payments exert upon farmland market values. Describes possible effects that the 1995 Farm Program legislation might have on farmland values.

"New Method For Estimating Land Values," *Agricultural Outlook*, April 1995 (Dave Westenbarger, Doug Beach, and Chris Cadwallader). Discusses advantages to be gained from use of NASS's June Agricultural Survey (JAS) as the survey instrument for obtaining information on farmland values and cash rents. Also describes the statistical basis of JAS sample as it relates to collecting farmland value information.

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