

# Missouri Farmland Values

Individuals and businesses often need an estimate of the value of a piece of land. A properly done appraisal provides the most accurate estimate of a piece of land's value. Appraisals attempt to estimate value from comparable sales. Comparable sales should be nearby, have sold recently and have similar characteristics.

It is not always feasible to get an appraisal on a piece of land, particularly when a historical value is sought. A historical land value is often needed to calculate taxes and settle estates. When appraisals are not feasible, estimates from U.S. Department of Agriculture (USDA) data may be an acceptable option.

## USDA agricultural land values

The National Agricultural Statistics Service of the USDA collects and reports information on the market value of agricultural land and buildings. The [Census of Agriculture](#)<sup>1</sup> is conducted every five years and seeks responses from every farmer. The published censuses report the market value of *farmland, including buildings* for each county in the year the information was gathered. Table 1 provides the average market value of *farmland, including buildings* by Missouri county for past agriculture censuses.

The USDA updates the state average market value of *farmland, including buildings* every year. This update relies on surveying a subset of farmers, select Realtors and others who have direct knowledge of land sales in each state. The published results do not have county values. The [USDA's annual land values summary](#)<sup>2</sup> reports values for these four land classes: *all cropland, nonirrigated cropland, irrigated cropland* and *pastureland*. These land classes are not reported on a county basis in the Census of Agriculture. Table 2 provides the average market value of these agricultural land classes for the state of Missouri since 1951.

## Understanding USDA data

Understanding some characteristics of the USDA agricultural land value estimates is important for individuals and businesses wishing to use them for business purposes. From 1850 to 1996, the USDA annually reported for each state a single value estimate called *farmland, including buildings*. Since 1997, the USDA has additionally reported a state value by various agricultural land classes without buildings.

Every five years, in the Census of Agriculture, USDA reports *farmland, including buildings* for each county. Houses, barns, sheds and other buildings on the land are included in the reported asset value. This value merges all types of land — such as irrigated, nonirrigated and pastureland — together.

The USDA estimates are for either an entire county or the entire state. However, the value of land can vary considerably within any one county. More productive land is worth more than less productive land. Cropland is worth more than pastureland. Land adjacent to certain highways may be worth more than land farther from those highways. None of these factors are reported in the county and state estimates of land and buildings. For this reason, the estimate may not provide an acceptable value for an individual piece of land.

The reports provide a consistent record of trends in land values. Because the methodology is consistent over time, the annual changes reported are likely to reflect what happens on individual pieces of land. However, changes over time may cause the values of certain pieces of land to differ from the USDA reported average. For example, land 20 miles out of city limits may have been considered for only agricultural purposes in 1970. By 2022, that land may be much closer to city limits and people want to buy it for a house site. That difference in the perceived uses for the land may drive its value much higher than the state or county average.

The Census of Agriculture values are most useful for estimating specific land values because they provide county-level estimates. The annual survey data of state land values by type is helpful for observing trends in land values in the years between censuses. The reported values for various types of agricultural land in Missouri are very highly correlated (correlation coefficient of .95 to .99)

with the reported value for *farmland, including buildings*. A correlation of 1 indicates perfect correlation.

Because the county value is an average for all land in the county, it most likely reflects the value of an individual piece of land to the extent that piece of land is like the average county land type. For example, if a county contains mostly cropland and the land under consideration is mostly cropland, the county value may fit well. But if the land under consideration is all pastureland, the county value will likely overvalue that particular piece of land.

## Estimating historical values

When an historical value estimate for a particular piece of land is needed, it is advisable to start with the county-level data reported in the Census of Agriculture. Because county data are only reported every five years, methods of estimating the value in intervening years have been developed.

If the percent change in the annual reported state value for *farmland, including buildings* accurately reflects the change for land in each county, this percent change can be applied for years when no county-level data exist. The steps below indicate how a county-level estimate for land value could be obtained for any year.

**Step 1:** Find which Census of Agriculture immediately precedes the year for which you are interested in finding a value.

**Step 2:** Locate the value of ag land in the county in that census data (see Table 1).

**Step 3:** Locate the values for ag land in Missouri for the years between the year of the census and the year of interest (see Table 2).

**Step 4:** Determine the percent change in state land value between the two years:

Percent change = (ending year value ÷ beginning year value) – 1

**Step 5:** Increase the county value from Step 1 by the percent change from Step 4:

County value in the desired year = county value in previous census × (1 + percent increase between the desired year and the previous Census of Ag value)

For example, if you wanted to know the value of ag land in Adair County in 2010, perform the following steps.

**Step 1:** *The 2007 Census of Agriculture is the nearest census prior to the year 2010.*

**Step 2:** *The value reported for Adair County in the 2007 census is \$1,862 (from Table 1).*

**Step 3:** *The Missouri state value for ag land in 2007 was \$2,170 and in 2010 was \$2,270 (from Table 2).*

**Step 4:** *The percent change is 4.6% (= 2,270 ÷ 2,170 – 1).*

**Step 5:** *The estimated value of land in Adair County in 2010 is \$1,948 (= \$1,862 × 1.046).*

## Accounting for land quality differences

A more accurate estimate than the average county land value for a previous year is occasionally desired. This need can occur when the land in question obviously differs from the average county land value. Perhaps proximity to a town, presence of irrigation, productivity of the land or some other characteristic makes modifying the county-level value important.

The estimate of county land value can be modified to account for expected value differences by following the steps below.

**Step 6:** Obtain an appraisal for the market value of the land. An appraisal done at any time can be used but more recent appraisals are best. The value of recently built structures should be removed from the appraisal so that only land valuation is being considered.

**Step 7:** Estimate the county value of the land for the year in which the appraisal was made (from steps 1–5).

**Step 8:** Estimate the percent difference between the appraisal value and the estimated county land value:

Percent change = (appraisal value ÷ county value) – 1

**Step 9:** Modify the county value for the year of concern (from Step 5) by the percent difference (from Step 8):

Adjusted land value = county value of land × (1 + percent difference between the appraisal value and the estimated county value)

## Spreadsheet tool

The [County Land Value Estimator \(XLSX\)](#)<sup>3</sup> was developed to accompany this publication. This Excel workbook contains the data found in tables 1 and 2 of this publication and provides a tool to estimate land values. Users can enter the county year of interest to receive estimated county values. County values can be modified to more closely approximate the value of a particular piece of land.

**Table 1. Average market value (in dollars per acre) of farmland and buildings for Missouri counties.**

<b>County</b>	<b>1959</b>	<b>1964</b>	<b>1969</b>	<b>1974</b>	<b>1978</b>	<b>1982</b>	<b>1987</b>	<b>1992</b>	<b>1997<sup>b</sup></b>	<b>2002</b>	<b>2007</b>	<b>2012</b>	<b>2017</b>	<b>2022</b>
Adair	115	118	168	299	511	635	418	454	669	1,012	1,862	2,453	2,792	4,098
Andrew	150	184	279	498	817	958	664	775	1,170	1,838	2,421	3,558	3,843	5,070
Atchison	183	221	315	548	1,004	941	680	775	1,131	1,642	2,452	4,862	4,903	6,221
Audrain	166	211	283	500	1,001	1,066	686	802	1,197	1,601	2,609	3,822	4,256	6,387
Barry	81	116	178	377	620	879	752	829	1,344	1,678	2,582	2,538	3,429	4,384
Barton	87	128	186	360	694	824	486	625	788	1,000	1,858	2,105	2,753	4,126
Bates	103	136	227	384	651	694	485	611	976	1,199	1,955	2,268	3,090	4,006
Benton	59	91	139	264	472	680	457	568	938	1,115	1,901	2,090	2,737	4,020
Bollinger	56	90	136	281	532	672	596	626	1,022	1,292	1,873	2,014	2,507	3,609
Boone	127	171	285	509	907	958	794	1,036	1,647	2,544	2,805	3,644	5,654	5,608
Buchanan	181	216	295	499	980	1,009	792	887	1,228	1,790	2,702	3,451	4,053	5,382
Butler	109	195	260	498	890	991	758	929	1,200	1,499	2,266	3,184	4,695	5,085
Caldwell	119	142	219	393	674	804	540	581	868	1,369	1,999	2,275	3,170	4,467
Callaway	95	133	194	383	762	952	624	817	1,216	1,780	2,548	3,267	3,960	4,653
Camden	34	47	91	208	487	563	474	524	807	1,254	1,858	2,176	2,208	2,851
Cape Girardeau	121	180	233	410	859	1,100	823	1,046	1,385	1,891	2,540	3,133	4,343	4,745
Carroll	142	183	262	437	795	911	648	792	971	1,295	2,114	3,134	3,580	5,366
Carter	39	66	87	176	419	538	463	540	822	1,048	1,630	1,663	1,909	2,342
Cass	152	211	357	552	931	1,091	903	1,178	1,560	1,844	2,839	3,318	3,759	4,459
Cedar	62	95	141	289	492	685	478	568	909	1,146	1,823	1,822	2,489	3,763
Chariton	133	166	257	397	786	938	585	721	1,014	1,333	1,969	2,973	3,439	4,955
Christian	107	138	220	455	686	889	882	1,259	1,792	2,387	2,785	3,124	4,027	5,535
Clark	98	138	201	366	747	774	554	603	800	1,165	1,971	2,654	3,575	4,859
Clay	278	300	487	776	1,287	1,476	1,050	1,329	1,916	3,392	2,850	4,282	4,169	6,629
Clinton	155	185	296	561	866	950	725	796	1,274	1,541	2,330	3,427	3,721	5,692
Cole	86	121	160	346	558	822	691	862	1,181	1,974	2,410	2,913	3,646	5,078
Cooper	113	139	206	340	669	729	525	707	955	1,332	2,226	2,841	3,268	5,376
Crawford	58	80	146	298	453	538	560	674	920	1,247	1,859	2,080	2,583	2,882
Dade	73	106	174	321	568	684	486	600	897	1,277	1,819	2,192	2,807	3,520
Dallas	63	83	151	303	522	707	625	675	1,159	1,396	2,223	2,326	2,538	4,179
Daviess	118	147	208	388	691	861	522	597	723	1,176	1,937	2,784	3,265	4,517
DeKalb	124	161	268	449	706	879	512	573	908	1,139	1,958	2,817	3,273	4,456
Dent	43	55	96	224	336	464	450	526	762	991	1,683	1,602	2,091	2,920
Douglas	39	53	100	244	445	578	537	595	789	1,071	1,845	1,624	2,100	2,936
Dunklin	249	426	422	590	1,112	1,273	960	1,100	1,469	1,936	2,472	3,770	5,090	6,938
Franklin	111	147	248	482	750	1,070	958	1,182	1,637	2,431	2,992	3,722	3,864	5,647
Gasconade	63	82	139	260	477	590	637	756	1,047	1,586	2,205	2,451	2,787	3,826
Gentry	109	127	196	358	657	728	522	551	796	1,156	1,869	2,636	3,098	4,448
Greene	187	231	322	586	939	1,203	1,298	1,366	2,222	3,299	3,277	3,683	4,745	7,004
Grundy	116	134	223	404	750	1,042	528	657	732	1,024	1,861	2,303	2,928	4,305
Harrison	104	126	162	323	575	707	435	496	644	951	1,837	2,494	2,768	3,799
Henry	97	140	224	389	707	746	553	652	852	1,209	1,803	2,124	2,690	4,028

**Table 1. Average market value (in dollars per acre) of farmland and buildings for Missouri counties.** (continued)

<b>County</b>	<b>1959</b>	<b>1964</b>	<b>1969</b>	<b>1974</b>	<b>1978</b>	<b>1982</b>	<b>1987</b>	<b>1992</b>	<b>1997<sup>b</sup></b>	<b>2002</b>	<b>2007</b>	<b>2012</b>	<b>2017</b>	<b>2022</b>
Hickory	47	73	135	264	416	543	504	514	701	1,082	1,562	1,941	2,108	3,566
Holt	173	239	290	543	981	1,109	716	919	1,047	1,491	2,452	3,799	4,893	5,713
Howard	104	145	212	365	709	754	558	723	1,059	1,334	2,109	2,537	3,023	3,853
Howell	50	68	124	272	481	664	528	623	986	1,372	1,734	1,883	2,144	2,894
Iron	42	68	126	275	489	582	453	585	957	1,332	1,708	1,610	2,065	2,697
Jackson	323	403	551	838	1,251	1,568	1,396	1,763	2,214	3,675	3,266	4,037	5,814	6,658
Jasper	130	171	247	441	718	861	684	821	1,234	1,494	2,210	2,337	3,221	4,178
Jefferson	114	169	293	570	859	1,176	1,022	1,441	2,029	2,635	3,080	3,407	4,200	5,915
Johnson	108	138	235	445	768	954	736	802	1,137	1,693	2,227	2,645	3,344	4,787
Knox	116	131	193	368	744	783	483	552	799	1,391	1,897	2,981	3,042	4,706
Laclede	65	78	142	301	474	637	558	710	940	1,377	1,928	2,200	2,517	3,518
Lafayette	178	217	319	620	985	1,081	835	992	1,445	1,831	2,705	4,225	4,535	7,328
Lawrence	109	146	212	440	725	906	763	873	1,306	1,777	2,467	2,562	3,198	4,465
Lewis	116	129	204	391	775	807	496	604	871	1,106	2,131	2,894	3,312	4,861
Lincoln	147	191	294	495	916	1,135	962	1,145	1,701	2,172	3,135	3,900	4,361	5,019
Linn	117	119	189	428	699	793	455	546	692	1,005	1,826	2,416	2,883	4,261
Livingston	125	152	217	404	729	892	516	793	895	1,285	2,025	2,916	3,372	4,690
Macon	86	116	158	293	602	682	466	523	684	1,072	1,792	2,477	3,194	4,026
Madison	49	77	115	229	437	535	455	619	719	973	1,710	1,840	2,099	2,627
Maries	43	56	87	216	368	498	418	474	749	1,032	1,704	1,951	1,971	3,134
Marion	146	181	249	408	753	971	606	781	1,021	1,226	2,231	3,561	3,966	6,203
McDonald	72	95	193	342	696	775	757	885	1,284	2,029	2,370	2,314	2,682	3,910
Mercer	82	91	150	292	592	614	430	550	883	5,358 <sup>c</sup>	1,811	2,219	2,693	3,903
Miller	51	76	112	241	465	561	523	623	884	1,479	1,966	2,221	2,497	3,272
Mississippi	235	361	400	526	1,132	1,380	1,020	1,267	1,590	1,855	2,365	4,153	5,837	6,746
Moniteau	89	112	174	321	564	727	546	689	945	1,380	2,375	2,698	3,570	4,680
Monroe	111	158	220	400	844	881	567	667	913	1,183	2,264	3,125	3,559	5,186
Montgomery	124	164	260	469	749	1,001	699	900	1,200	1,639	2,850	3,453	3,771	5,802
Morgan	66	91	148	304	582	644	535	570	986	1,553	2,216	2,646	3,837	5,025
New Madrid	280	435	479	566	1,156	1,384	942	1,148	1,466	1,837	2,425	4,435	5,591	6,704
Newton	112	147	209	438	736	989	730	969	1,382	1,760	2,623	2,577	3,639	4,732
Nodaway	135	163	256	442	921	868	562	689	848	1,195	2,102	3,251	4,012	5,499
Oregon	36	50	102	238	385	547	413	569	835	1,004	1,706	1,556	1,781	2,560
Osage	56	65	104	250	402	500	480	553	945	1,400	1,938	2,047	2,415	3,470
Ozark	34	45	88	211	397	508	567	529	737	1,366	1,705	1,624	2,133	2,762
Pemiscot	323	431	481	567	1,064	1,409	937	1,059	1,376	1,772	2,161	3,618	5,235	6,687
Perry	121	130	208	341	773	866	705	801	1,081	1,487	2,175	2,673	3,273	4,388
Pettis	112	165	238	408	772	832	610	754	1,003	1,388	2,365	2,736	3,500	4,906
Phelps	57	81	136	256	396	641	546	637	884	1,519	2,065	2,301	2,636	3,912
Pike	120	166	221	424	911	925	626	796	1,180	1,618	2,368	3,461	3,516	4,561
Platte	197	234	441	669	1,191	1,147	902	1,178	1,922	2,306	2,843	3,888	4,429	5,713
Polk	80	108	182	363	588	761	640	724	1,257	1,409	2,165	2,066	2,525	3,857

**Table 1. Average market value (in dollars per acre) of farmland and buildings for Missouri counties.** (continued)

County	1959	1964	1969	1974	1978	1982	1987	1992	1997 <sup>b</sup>	2002	2007	2012	2017	2022
Pulaski	51	68	101	222	338	503	462	494	759	1,310	1,862	1,948	2,237	3,020
Putnam	69	87	135	248	492	544	367	404	618	866	1,725	2,063	2,520	3,789
Ralls	119	162	255	391	813	912	634	789	1,080	1,437	2,373	3,210	3,850	5,816
Randolph	115	149	209	355	733	897	554	604	935	1,174	2,033	2,630	3,461	4,578
Ray	148	181	280	465	843	1,006	713	886	1,285	1,490	2,200	2,730	3,516	5,276
Reynolds	38	55	101	204	411	502	369	714	605	1,048	1,424	1,463	1,599	2,655
Ripley	64	86	129	262	495	618	568	579	803	1,016	1,729	1,794	2,446	2,855
St. Charles	258	278	462	724	1,193	1,700	1,542	2,097	2,598	3,991	3,271	4,240	4,885	6,162
St. Clair	62	98	161	320	587	660	442	509	707	1,018	1,787	1,656	2,453	3,962
St. Francois	91	109	175	365	730	785	805	1,026	1,251	2,033	2,636	2,513	2,933	5,052
St. Louis	899 <sup>a</sup>	1,033 <sup>a</sup>	917	1,094	1,785	3,213	2,259	2,152	2,592	3,627	3,686	4,128	4,348	10,928
Ste. Genevieve	90	122	162	325	633	757	717	827	1,118	1,466	2,168	2,305	2,951	4,393
Saline	190	234	294	509	915	1,094	815	861	1,223	1,368	2,209	4,023	4,010	6,325
Schuyler	90	97	162	282	581	618	367	401	634	811	1,700	2,226	2,581	4,152
Scotland	103	131	180	356	730	742	470	615	761	1,122	1,965	2,936	3,370	5,438
Scott	176	261	345	479	1,029	1,308	834	1,088	1,347	1,745	2,585	4,077	5,087	6,405
Shannon	39	56	120	207	440	489	411	483	607	1,052	1,756	1,670	1,963	2,396
Shelby	118	142	215	369	782	812	543	611	911	1,187	2,073	3,552	3,729	6,127
Stoddard	177	287	339	482	1,058	1,322	940	1,209	1,563	2,048	2,369	4,392	5,353	6,814
Stone	77	90	191	339	602	696	578	815	1,280	1,927	2,465	2,369	2,894	4,003
Sullivan	72	89	133	290	529	635	354	440	678	814	1,566	1,858	2,338	3,213
Taney	42	63	114	252	417	487	471	613	1,098	1,728	1,902	1,961	2,235	3,385
Texas	46	63	107	231	429	538	443	585	772	1,027	1,737	1,641	2,066	3,220
Vernon	78	120	182	317	663	689	474	652	897	1,105	1,842	2,156	2,841	4,000
Warren	123	164	259	515	1,033	1,267	973	1,584	1,792	2,312	3,324	3,880	4,048	5,779
Washington	61	88	129	266	401	491	525	665	823	1,477	1,864	1,919	2,372	2,926
Wayne	45	60	103	214	421	591	453	537	786	1,034	1,706	1,527	2,350	2,495
Webster	76	96	173	364	602	701	656	805	1,219	1,722	2,613	2,612	3,102	4,559
Worth	108	118	201	292	709	611	448	542	545	916	1,635	2,254	2,844	3,888
Wright	49	66	108	290	477	592	510	654	892	1,259	1,811	1,797	2,158	3,310
State average	112	150	224	396	723	856	640	774	1,084	1,508	2,179	2,791	3,385	4,612

Source: [U.S. Census of Agriculture](#)<sup>1</sup>

a. St. Louis City and County are included in 1959 and 1964; all other years are county only.

b. 1997 data have been reweighted to reflect the new methodology used in the more recent censuses.

c. This is the federally recognized value for this year, yet it is abnormally high compared to peer counties and land values in subsequent years. We recommend users instead use \$1,347 (average of land values in 1997 and 2007).

## Web addresses

1. [nass.usda.gov/AgCensus](http://nass.usda.gov/AgCensus)
2. [usda.library.cornell.edu/concern/publications/pn89d6567](http://usda.library.cornell.edu/concern/publications/pn89d6567)
3. [extension.missouri.edu/media/wysiwyg/Extensiondata/Pro/AgBusinessPolicyExtension/Docs/LandValue.xlsx](http://extension.missouri.edu/media/wysiwyg/Extensiondata/Pro/AgBusinessPolicyExtension/Docs/LandValue.xlsx)
4. [quickstats.nass.usda.gov](http://quickstats.nass.usda.gov)

**Table 2. Missouri state average values for various classes of agricultural land (in dollars per acre).**

Year	Missouri	Year	Missouri	All cropland	Nonirrigated cropland	Irrigated cropland	Pastureland
1951	75	1992	734	N/A	N/A	N/A	N/A
1952	85	1993	774	N/A	N/A	N/A	N/A
1953	82	1994	825	N/A	N/A	N/A	N/A
1954	79	1995	880	N/A	N/A	N/A	N/A
1955	82	1996	950	N/A	N/A	N/A	N/A
1956	87	1997	1,010	1,040	1,000	1,600	660
1957	94	1998	1,070	1,130	1,090	1,670	700
1958	102	1999	1,150	1,220	1,180	1,820	770
1959	110	2000	1,230	1,300	1,260	1,930	840
1960	115	2001	1,300	1,380	1,340	2,000	910
1961	120	2002	1,380	1,480	1,440	2,070	980
1962	127	2003	1,470	1,580	1,540	2,150	1,050
1963	132	2004	1,560	1,660	1,630	2,220	1,120
1964	145	2005	1,750	1,830	1,800	2,410	1,310
1965	155	2006	1,910	2,010	1,970	2,650	1,500
1966	168	2007	2,170	2,330	2,300	2,800	1,730
1967	186	2008	2,300	2,500	2,470	2,980	1,800
1968	200	2009	2,160	2,490	2,450	2,990	1,670
1969	217	2010	2,270	2,600	2,560	3,140	1,600
1970	224	2011	2,420	2,790	2,750	3,320	1,610
1971	236	2012	2,710	3,120	3,080	3,640	1,700
1972	261	2013	2,850	3,500	3,450	4,140	1,790
1973	294	2014	3,050	3,750	3,670	4,670	1,820
1974	384	2015	3,230	3,680	3,570	4,950	1,880
1975	396	2016	3,220	3,570	3,470	4,830	1,830
1976	456	2017	3,120	3,560	3,450	4,940	1,830
1977	548	2018	3,380	3,490	3,380	4,770	1,920
1978	641	2019	3,420	3,510	3,370	4,800	1,990
1979	726	2020	3,430	3,560	3,430	4,740	2,020
1980	902	2021	3,760	3,870	3,760	4,880	2,200
1981	990	2022	4,230	4,400	4,280	5,500	2,450
1982	945	2023	4,610	4,720	4,610	5,740	2,560
1983	856	2024	4,800	4,910	4,800	6,000	2,650
1984	875	2025	5,000	5,150	5,050	6,150	2,750
1985	689						
1986	648						
1987	604						
1988	640						
1989	684						
1990	701						
1991	723						

Source: [USDA National Agricultural Statistics Service](#)<sup>4</sup>

Notes: Values for all cropland, nonirrigated cropland, irrigated cropland and pastureland were not reported by the USDA prior to 1997. N/A = Not available.

Original authors: Ronald L. Plain and Joyce White



Issued in furtherance of the Cooperative Extension Work Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Director, Cooperative Extension, University of Missouri, Columbia, MO 65211 • MU Extension provides equal opportunity to all participants in extension programs and activities and for all employees and applicants for employment on the basis of their demonstrated ability and competence without discrimination on the basis of race, color, national origin, ancestry, religion, sex, sexual orientation, gender identity, gender expression, age, genetic information, disability or protected veteran status. • 573-882-7216 • [extension.missouri.edu](http://extension.missouri.edu)