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Estimating Arkansas Farmland Values Based on Historic Index Numbers

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Farmland values have generally increased over the past 60 years (Figure 1). A few exceptions to this trend have occurred – most notably during the 1980s when Arkansas farmland values decreased by 34 percent between 1982 and 1987. However, this decrease during the 1980s followed a nearly 200 percent increase in farmland values during the 1970s. The farmland value high set in 1982 was not exceeded for another 16 years. Since 1998, Arkansas farmland values have increased an average of five (5) percent per year, with values declining in only two years – in 2009 by 3.3 percent and in 2016 by a modest 0.66 percent.

Over the past few years the growth rate in Arkansas farmland prices has slowed. This is largely due to lower commodity prices and farm incomes. Following very rapid growth of 12 percent in 2007 for example, annual growth rates since then have averaged near 3.7 percent. Current expectations are for Arkansas farmland values to increase in 2024 by 4.8 percent over the previous year.

Historic farmland values are of interest to farmers, landowners, investors and policy makers. Farm real estate represents the single largest asset on a typical farm balance sheet. The USDA Economic Research Service (ERS) forecasts that 2024 farm real estate (land and structures) will account for 83% of total U.S. farm assets. Changes in the value of farm real estate have an important bearing on the farm sector's financial performance. As a principal source of collateral for farm loans and a key component of many farmers' retirement funds, changes in its value can affect the financial wellbeing of landowners.

Figure 1. Arkansas and U.S. Farmland Values 1962-2024
(Source: USDA, Economic Research Service. USDA National Agricultural Statistics Services)

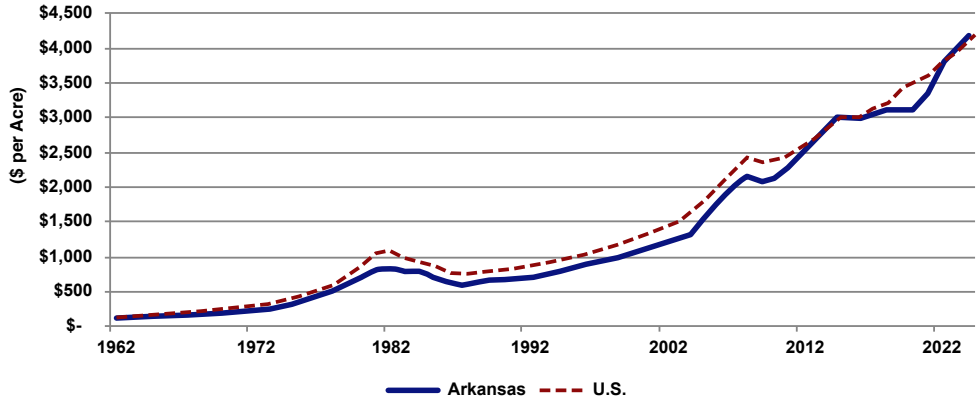

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TABLE 1. Index Numbers[1] of Arkansas Farmland Values					
YEAR	INDEX (1982 = 100)	YEAR	INDEX (1982 = 100)	YEAR	INDEX (1982 = 100)
1962	11.77	1983	88.69	2004	149.64
1963	13.32	1984	87.96	2005	168.80
1964	15.15	1985	82.76	2006	182.48
1965	16.97	1986	71.08	2007	204.38
1966	18.52	1987	66.06	2008	220.80
1967	19.07	1988	69.43	2009	213.50
1968	20.62	1989	73.08	2010	218.98
1969	22.45	1990	72.63	2011	222.63
1970	23.72	1991	76.73	2012	239.05
1971	23.27	1992	74.36	2013	246.35
1972	27.01	1993	80.29	2014	258.21
1973	30.75	1994	84.58	2015	275.55
1974	37.04	1995	89.69	2016	273.72
1975	38.23	1996	92.15	2017	283.76
1976	43.34	1997	97.63	2018	288.32
1977	49.45	1998	104.93	2019	308.39
1978	55.29	1999	111.31	2020	316.61
1979	70.26	2000	117.70	2021	325.73
1980	83.76	2001	123.18	2022	346.72
1981	96.35	2002	128.65	2023	357.66
1982	**100.00**	**2003**	**135.04**	**2024**	**375.00**

Source: USDA-NASS

[1]Index numbers based on 1982 = 100 are calculated from USDA sources including NASS and ERS.
Some years have been revised compared to previous versions of this table due to updates from the Census of Agriculture.

The farmland value index in Table 1 can be used to estimate farmland value in a given year if the value was known for any year in the span of 1962 - 2024. The Guide to Using the Arkansas Farmland Value Index section accompanies Table 1. Index numbers were calculated based upon the year 1982; therefore, the index value for 1982 equals 100.

Bottom-Line Considerations

Index numbers are based on nominal values and are not based on real values adjusted for inflation or purchasing power. Although it is useful for estimating the value of Arkansas farmland relative to another point in time, the index number only provides a single piece of information to include with other information in the decision-making process.

The value of farmland fluctuates for a variety of reasons. With a continued change in the market for Arkansas farmland, owners and potential owners of farmland can use index numbers based upon USDA information to estimate the value of land given a known value in another year. Estimated farmland values do not substitute for land appraisals and may deviate from true market value for any number of reasons, including land improvements, buildings and facilities, pressure from development and urban sprawl, mineral rights and previous farm production management practices.

GUIDE TO USING THE ARKANSAS FARMLAND VALUE INDEX

The index for farmland values can be used to estimate the farmland value for a past year or to estimate the value of farmland in the current year, depending upon the given information. If the value of farmland is known in any year, the value can be estimated for any other year since 1962 with the farmland value index.

Estimating the farmland value for a past year

The farmland value for a past year can be estimated with the formula:

$$\text{Farmland value from past year} = \text{current farmland value} \times \frac{\text{index from past year}}{\text{index for current year}}$$

Hypothetical Example 1: Current land values are $4,110 per acre. What was the value of this land in 1987? Using the table, the index for 1987 and 2024 are 66.06 and 375.00, respectively.

$$\text{Estimated 1987 farmland value} = \$4{,}110 \times \frac{66.06}{375.00}$$

Estimated 1987 farmland value equals $724 per acre.

Estimating the current farmland value based on the value in a past year

Current farmland values can be estimated using past values with the formula:

$$\text{Current farmland value} = \text{farmland value from past year} \times \frac{\text{index for current year}}{\text{index from past year}}$$

Hypothetical Example 2: My relative paid $800 per acre for non-irrigated land in 1992. What is the estimated value of this land today? Using the table, the index for 1992 and 2024 are 74.36 and 375.00, respectively.

$$\text{Estimated 2024 farmland value} = \$800 \times \frac{375.00}{74.36}$$

Estimated 2024 farmland value equals $4,034 per acre.

Data Resources

USDA, Economic Research Service, "Farm sector balance sheet and selected financial ratios, 2015-2024F." Retrieved from: https://data.ers.usda.gov/reports.aspx?ID=17835

USDA National Agricultural Statistics Service (2024) Arkansas Land Values and Cash Rents. Retrieved from: https://downloads.usda.library.cornell.edu/usda-esmis/files/pn89d6567/vh53zm770/1c18g799h/land0824.PDF

USDA Economic Research Service (2024) Farmland Value. Retrieved from: https://www.ers.usda.gov/topics/farm-economy/land-use-land-value-tenure/farmland-value/

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