

## **A Comparison of Kansas Net Farm Income from KFMA and ERS**

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### **Introduction**

Every year, data from the Kansas Farm Management Association (KFMA) is used in research and Extension publications as a representation of Kansas farms. However, how well does this KFMA data actually represent Kansas? The data is not a randomized sample of Kansas farms as farmers choose to be in the program. Still, there are a wide variety of farm types and farm sizes in the database. This paper utilizes a simple correlation comparison for data collected by the USDA Economic Research Service (ERS) and KFMA. The two comparisons are value of farm production (VFP, i.e., gross revenue produced on the farm) and net farm income (NFI).

### **Comparison**

The data for the ERS estimate comes from a variety of other sources including data obtained from both published and unpublished NASS sources, the annual Agricultural Resource Management Survey (ARMS) Phase III, and USDA Farm Service Agency's Commodity Credit Corporation (CCC) loan data. Full documentation for the ERS estimate is available here (<https://www.ers.usda.gov/data-products/farm-income-and-wealth-statistics/general-documentation/>).

The Kansas Farm Management Association (KFMA) has been helping farmers with record keeping and farm management advice since the 1930's and has computerized farm records back to the early 1970's. There are currently over 2,000 farms in the KFMA system and about half of those farms will have records that are useable for research, teaching, and Extension analysis. The KFMA program provides both financial and production information.

The KFMA program uses accrual accounting for its financial records. The main difference in KFMA reported net farm income is the treatment of depreciation. For calculating NFI, tax depreciation is not used. Instead, economic depreciation is estimated from a formula that lowers the asset value at a slower rate than the MACRS

depreciation rate. The use of an estimate of economic depreciation should provide a better picture of the financial situation of a farm.

## **Discussion**

KFMA value of farm production is almost a perfect match for ERS value of farm production. The correlation is 0.97 when comparing the years 1973 through 2019. The correlation of net farm income isn't as strong at 0.842 but it is still a good match. Correlations can range from -1 to 1 where: -1 indicates a perfectly negative linear correlation between two variables, 0 indicates no linear correlation between two variables, and 1 indicates a perfectly positive linear correlation between two variables. With a 0 correlation, the variables move independent of each other.

While the correlation between ERS and KFMA net farm income isn't perfect and the KFMA farms are not representative of every Kansas farm, these farms do provide good insight into the profitability and financial structure of Kansas agriculture producers.

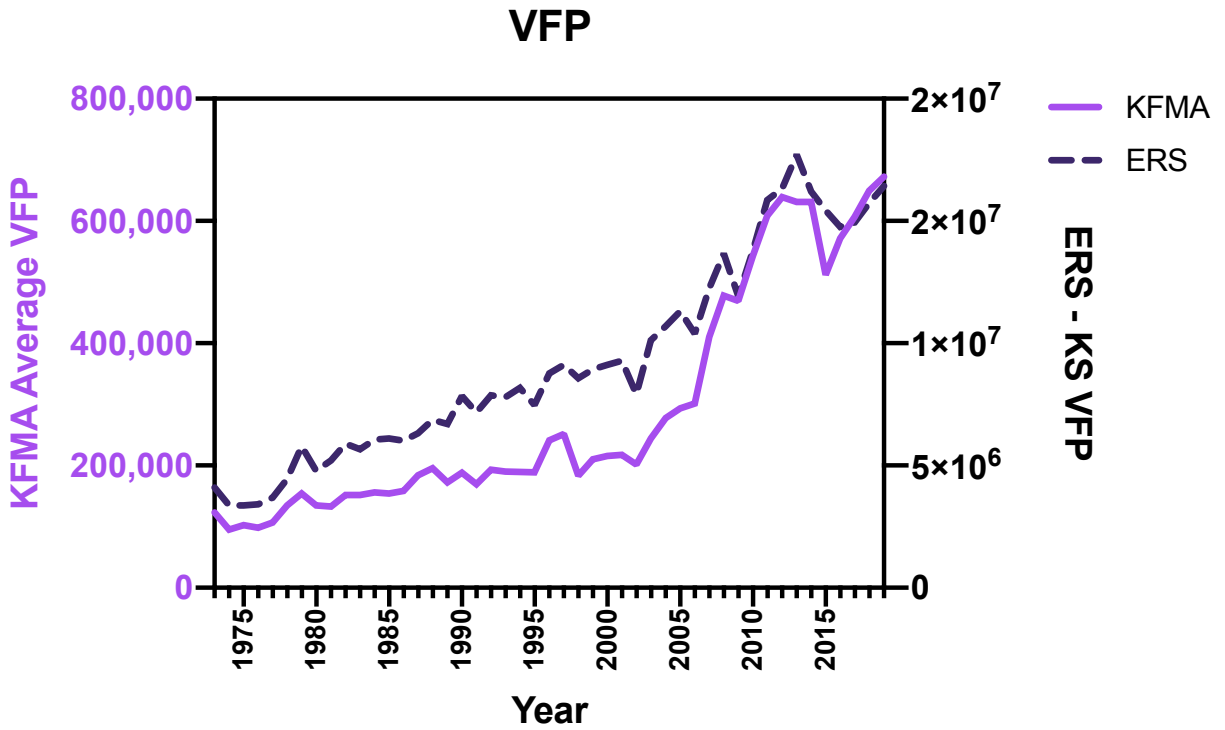


Figure 1. Comparison of ERS and KFMA Value of Farm Production Since 1973

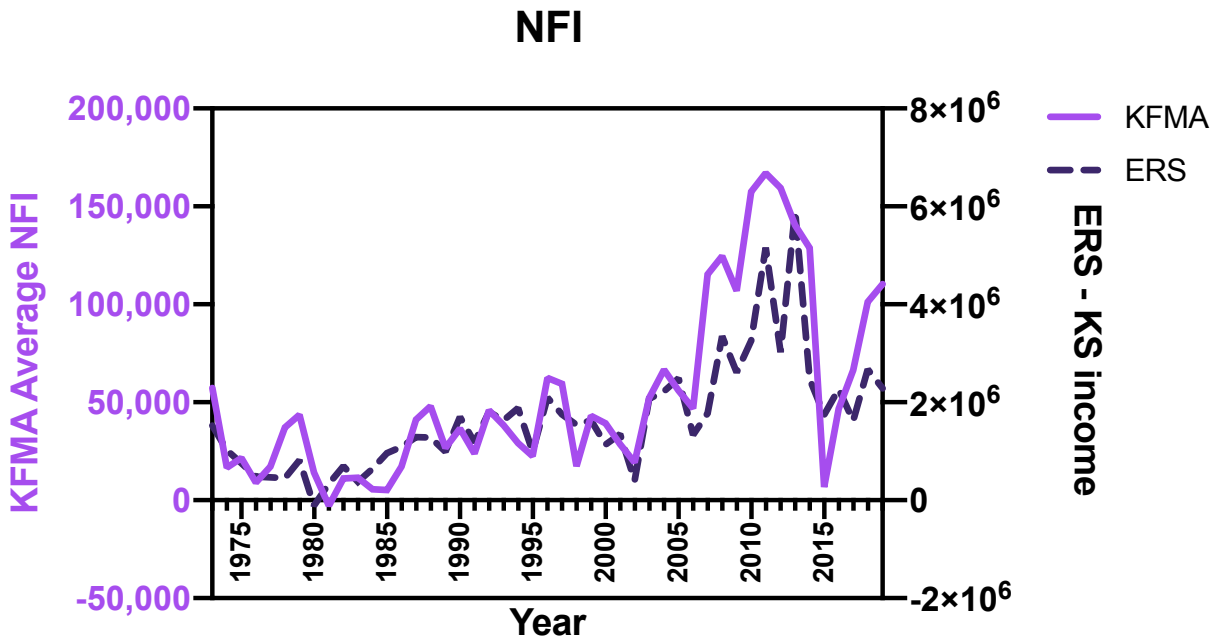


Figure 2. Comparison of ERS and KFMA Net Farm Income Since 1973

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