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# *The Fact Finder* George F. Warren



by Kenneth L. Robinson

***"Get The Facts."*** This was George F. Warren's guiding philosophy and legacy to his profession. For over 30 years, from the time he started teaching farm management at Cornell in 1907 until his death in 1938, Warren practiced what he preached. His influence extended to several generations of graduate students and to the faculty he recruited to deal with the pressing problems of agriculture in the 1920s and 1930s.



Warren obtained his bachelor's degree in mathematics from the University of Nebraska in 1897. Five years later he resigned his position as superintendent of schools in a small Nebraska town to come to Cornell and study under Liberty Hyde Bailey. He received a second BS degree from Cornell in 1903 and his PhD in 1905. He then spent a year as a horticulturist at the New Jersey Agricultural Experiment Station before returning to Cornell as an assistant professor of agronomy. In 1907, while still an assistant professor, he was made head of the newly organized Department of Farm Corps. In 1909, based on his accomplishments in that position, he was promoted to professor and named by Dean Bailey as head of a newly expanded Department of Farm Crops and Farm Management. he served in that capacity for the next 29 years.

Warren's approach to dealing with the numerous problems confronting rural areas during his tenure at Cornell, including rural poverty, delinquency in repaying farm debts, poor rural roads, and land abandonment, inferior rural services, and high marketing costs was to hire a young professor or a graduate student to conduct a survey. The survey was designed to identify the extent of the problem, who or what groups were adversely affected, and why some farms, counties, school districts or farm cooperatives appeared to be doing better than others. His problem-oriented research and teaching led him to add faculty members in such diverse fields as state and local government, cooperative management and accounting, milk marketing, land economics, and prices.

## Farm Surveys

Warren is best known for initiating farm management surveys. He was convinced that less successful farmers could benefit from the experience of their more successful neighbors. One of his favorite expressions was "Every farm is an experiment station and every farmer the director thereof." By collecting and correlating data on individual farm units, he hoped to capitalize on the "experiments" conducted by farmers. The ultimate objective of collecting data from farms was to identify the factors associated with success as measured by labor income. Farm size, output per worker, yields, land quality, and other factors were related to a number of measures of success. These relationships served as a basis for Warren's teaching and recommendations to farmers. His textbook on farm management, based on the information drawn from farm surveys and his own observations, appeared in 1913 and ultimately sold over 90,000 copies. It set the standard for teaching farm management for much of the ensuing two decades.

## Prices

The collapse of farm commodity prices that followed World War I led Warren to an analysis of price behavior and what was then referred to as the "general level of prices." In today's language, he became a "macroeconomist," arguing that the fortunes of farmers as a group were determined mainly by forces outside of agriculture; that is, by general inflation and deflation. He and F. A. Pearson, a newly appointed professor of agricultural prices at Cornell, initiated empirical studies of when and why prices changed. Index numbers of wholesale prices were constructed for the United Kingdom, China and a number of other countries as well as the United States. This required locating obscure sources of data including old account books and diaries. Ultimately, they suc-

ceeded in constructing a wholesale commodity price index for the United States dating back to 1790. Their figures are still used for early years of the U.S. wholesale price index.

Using these index numbers, Warren and Pearson were able to compare rates of inflation (or deflation) among countries and to identify turning points in the general level of prices. They focused attention on leads and lags and changes in price relationships among different components of the index, particularly the relationship between average farm and wholesale industrial prices. These changing relationships were highlighted in a paper Warren presented at the American Farm Economics Association meeting in 1919.

Two years later, he prepared a manuscript on farm prices that was published by the U.S. Department of Agriculture. In it, he emphasized that "no price is high or low except by comparison;... one must know the general price level to make comparisons."

As with previous studies, Warren was concerned initially with getting the facts on price behavior. Empiricism, not theory, guided Warren and Pearson's research, but their results led them to what could be described as a modified "quantity of money" theory of price behavior. They noted that the supply of the medium of exchange or monetary base (gold, silver, shells, tobacco, or some other commodity) strongly influenced the level of prices and the direction of change in prices. Commodity prices moved in response to changes in demand relative to supply of the medium of exchange as well as changes in demand relative to supply for the commodities included in the index. Thus, they concluded, one of the major ways to raise farm prices was to increase the supply of gold or to use another more plentiful commodity (or group of commodities) as a base for the supply of money. An alternative, the reasoned, was simply to increase the monetary base by raising the value (price) of gold.

Warren and Pearson's analysis attracted the attention of those seeking an answer to the price collapse of the 1920s and 1930s. Farmers and farm organizations supported their recommendation that the United States raise the price of gold to bring about "reflation," thereby making it easier for debtors to meet their repayment obligations. Despite the reservations of academic economists and many conservative bankers, Warren and Pearson scored a major victory. President Roosevelt invited Warren to the White House to explain his views. With the President's support as well as that of several farm groups, a provision authorizing a change in the gold content of the dollar was included in the Agricultural Adjustment Act of 1933. This provided the legal basis for a subsequent Presidential decree that raised the price of gold from \$20 to \$35 per ounce.

## State Policies

Warren had a profound influence on New York policies as well, especially during the period when Franklin D. Roosevelt was governor. Warren's studies of abandoned farm land in the 1920s had persuaded him that farming in certain areas involved very high financial risks because of poor soil resources, unfavorable terrain, high transportation costs, and costly or poor public services (owing to the low density of population). This led to classifying land in New York on the basis of its income-earning potential. Particular attention was given to identifying areas where farming was likely to remain unprofitable. Ultimately, Warren convinced the state to purchase abandoned farm land to get it out of circulation and prevent future generations from getting into trouble. Warren's studies of real estate taxes and local expenditures on education and roads in rural areas also helped convince the state legis-

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lature that state aid was essential to equalize educational opportunities and to help disadvantaged areas remain competitive. His students and faculty members were called upon to help design state aid formulas with this objective in mind.

## Production Cycles

Warren also had a long-standing interest in production cycles. His farm management studies had shown that cycles of over- and under-production were a major cause of price instability. Again, his conclusions were based on common-sense observations rather than sophisticated procedures designed to "decompose" time-series data. He noted the varying lengths of livestock and crop cycles and concluded that the interval between peaks and troughs was related to the length of the production process and the time required to cease production once a particular commodity was no longer profitable to produce. He called attention to the fact that cycles in milk production were longer than those for some other livestock products simply because more time is required to raise a heifer calf to an age when she could become part of a milking herd.

Warren's interest in cycles continued until his death. In his later years, he concentrated on the building cycle and concluded that it was a major contributor to economic instability. His last book, published in 1937, was entitled, "The World Price Level and the Building Cycle."

## Stern But Effective Teacher

George F. Warren was austere in appearance and manner. His biographer, F. A. Pearson, wrote that he called even his closest colleagues by their surnames. However, he possessed a quiet sense of humor and a dry wit. He also was noted for his quips. For example, his one-line comment on the government's grain storage program in the 1930s was that "bins are easy to fill but hard to empty." In referring to the disappearance of farms, he noted that "most adjustments in farming are made by the sheriff or the undertaker."


As with many great teachers, Warren was an excellent communicator, not because he was an accomplished orator or stage performer but because of what he said and how he said it. His speaking style was similar to his writing style—short, declarative sentences with little or no embellishment. Audiences remembered what he said. A new, young professor discovered in the early

1950s that farmers were still quoting from lectures Warren had given 15 or 20 years earlier. His following among farmers in New York was so great that he regularly filled the largest lecture hall on the campus when he spoke at the annual open house put on by the College of Agriculture to acquaint farmers with new ideas and new technology.

According to his graduate students, Warren's most effective teaching was done in weekly sessions in his office. The conversations ranged widely over the issues of the day. Frequently, the sessions went on so long that dinner had to be delayed. Warren had the ability to express ideas in simple homilies that made these sessions worthwhile and memorable for the students.

Warren was respected in the profession, as well as among farmers and New York political leaders. He served as the second president of the American Farm Economics Association and was active in forming the International Association of Agricultural Economists. In signing the bill authorizing the construction of what was to become Warren Hall, Governor Roosevelt called the building a personal tribute to Warren and to his influence in New York.

## His Legacy

Clearly, Warren was an innovator. He was not content to remain simply a specialist in farm management. His search for answers to current problems led him to expand the frontiers of agricultural economics. Anything that affected the welfare of farmers interested him. The enormous breadth of the profession today is partly a reflection of his innovative work in such areas as prices, production cycles, land use, and state and local government. Most important of all, Warren imbued his students with the necessity of doing empirical work—to approach every problem by first getting the numbers right. 

## For More Information

Readers may want to review the following publications to learn more about George F. Warren.

*Agricultural Surveys*, Agricultural Experiment Station Bulletin 344, by G. F. Warren, published by Cornell University, April 1914.

*Prices of Farm Products in the United States*, Bulletin No. 999 by G. F. Warren, published by the U.S. Department of Agriculture, August 1921.

*Prices*, by George F. Warren and Frank A. Pearson, published by J. Wiley and Sons in 1933.

"The Fact-Finder," *Farm Economics*, No. 208, by F. A. Pearson and W. I. Myers, published by Department of Agricultural Economics, New York State College of Agriculture, in February 1957.

*The Story of Agricultural Economics in the United States, 1840-1932*, by Henry C. Taylor and Anne Dewees Taylor, published by Iowa State College Press in 1952.

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