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## Henry Wallace and statistics

The story on Henry Wallace is not complete without reference to his contributions to plant breeding, genetics, and statistics. While Henry A. was a student at Iowa State University, he began a series of experiments on the home farm designed to determine whether methods then advocated for selecting seed corn really had anything to offer. He had studied plant breeding at Iowa State, which fueled his skepticism concerning existing dogma, and he wanted to put his knowledge to the test. This involved experiments and analysis of resultant data. And so began his interest in statistics.

While Henry A. was experimenting with corn breeding, he became interested in the relationship between the amount of corn produced nationally and its price. Wallace recalled later that he ran across the work of H.L. Moore from Columbia University in about 1913. After he had devoured Moore's work and methods, Wallace worked on his own in the analysis of agricultural prices, depending heavily on regression and correlation analysis. In 1920, he published the book *Agricultural Prices*, in which he makes generous use of the knowledge of statistics he had by then acquired.

Wallace wanted the faculty at ISU to know about the methods he had been using and was convinced that staff members were not sufficiently current in statistics. He met with several professors and, in his own words, "sold them on the idea that they should be able to evaluate their experimental work much more adequately if they had some adequate statistical background."

No shrinking violet, Wallace arranged to be invited to organize a class and to present these new methods to members of the Iowa State staff in the spring of 1924. He was helped by C.F. Sarle, who later became a leader in meteorology.

Wallace was concerned about the computational drudgery involved in statistics, especially in correlation analysis, so Sarle and Wallace arranged to borrow equipment from an insurance company in Des Moines,

which they hauled back and forth to Ames on Saturday mornings during the spring of 1924. A young staff member in Ames, George Snedecor, helped Wallace with this teaching project, and together they produced the research bulletin *Correlation and Machine Calculation*. In this bulletin, reference was made to Truman L. Kelley, R. A. Pearl, H. L. Rutz, H. R. Tolley, and M. J. B. Ezekiel, leading statisticians of the 20s and earlier. All of this activity at Iowa State led to the organization of the Mathematical Statistical Service in 1927 and the formation of the Statistical Laboratory in 1933; and brought R.A. Fisher from England to Ames in 1930. In Wallace's view, the strong impetus Fisher gave the program was a major factor contributing to its remarkable reputation.

Henry A.'s diverse interests were a contributing factor in his success and to the success of many ventures in which he was involved. His interest in genetics and statistics led to the start of the Iowa State Corn Yield Test and to the founding of the Pioneer Hy-Bred Corn Company, now the biggest in the world. He was regarded in the United States as the father of soil conservation, of rural electrification, the use of weather forecasting and of economic agricultural statistics. He was secretary of agriculture (1933-40); chairman of the Board of Economic Warfare (1941-45); vice president of the United States (1941-45); secretary of commerce (1945-46); editor of the *New Republic* (1946-47). He took an active interest in the Bureau of Agricultural Economics, which affected the growth of the Statistical Laboratory at Iowa State University and led to a huge sampling effort to obtain a reliable picture of the status of agriculture throughout the United State.

Until his death, Wallace continued to take an interest in the Statistical Laboratory, which has honored him by naming the seminar room as the "Henry A. Wallace Room," and in which his portrait is proudly displayed. ■

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