STEPHEN BABCOCK
Agriculture’s MVP
Biography written by:

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When people in Madison, Wisconsin, hear the word “Babcock,” they think of ice cream. Babcock Hall on the University of Wisconsin-Madison (UW-Madison) campus is famous for the ice cream made there. But the hall was named for Stephen Babcock who was famous for far more than ice cream.

Stephen Babcock enjoyed his work as a **scientist** at UW-Madison. His roaring laughter often echoed through the university’s **chemistry** buildings as he carried out his experiments.

Stephen did not work to become rich or famous. His goal to improve others’ lives drove his studies. His work led to the discovery of vitamins A and D and a new way to make cheese. But the Babcock Test made him famous. This tool improved the dairy industry in Wisconsin and around the world.
Peleg and Cornelia Babcock welcomed Stephen into the world on October 22, 1843. Seven years later, they had a second son named Linn. The family lived on a sheep farm in Bridgewater, New York. Stephen enjoyed spending time outdoors. A bee sting caused young Stephen to go blind in one eye.

At age 18, Stephen went to Tufts University. There he took classes like Greek and Latin. Stephen later told the *Wisconsin State Journal* that he was at the bottom of his Tufts class. But this did not discourage him.

Telephones like the one being used here were becoming more common in the late 1800s. Stephen was skeptical of telephones, and refused to have one in his home. He had one in his office because UW-Madison required it (1901).
In the fall of 1866, Stephen took engineering classes at another New York college. When his father died suddenly, Stephen moved home to care for the family farm. Later, he moved to a farm in Ithaca, New York, so he could farm and attend Cornell University.

Stephen switched his studies to chemistry and earned his master’s degree in it. Later, he earned his Ph.D. in organic chemistry from a German university.

In 1881, Stephen moved back to New York to work as an agricultural chemist at New York State Agriculture Experiment Station. There he researched cattle feed using chemistry.

Image courtesy of the UW-Madison Archives, S05976.

Stephen took a scientific approach toward many things in life, desiring evidence for claims others made. He would tell his students, “Just because you see it in a book is no reason to believe it so. Let’s look into it further.”
Wisconsin’s Dairy Industry

Many Wisconsin farmers grew wheat in the early 1800s. When the soil became too poor to grow wheat and insects ruined the crops in the mid-1800s, dairy farming grew more popular. Farmers were paid based on how much milk they sold. Dishonest farmers added water to their milk to make more money. This unfair practice caused some consumers to distrust farmers.

Butterfat makes high-quality dairy products. Watered-down milk does not. Creameries and cheese factories wanted to test the butterfat content in milk to prevent dishonest farmers from adding water to their milk. But the tests used were often wrong. The industry needed a better test.

Wisconsin is known as “America’s Dairyland.” In 2014, 27.9 billion pounds of milk and 11.5 billion pounds of cheese were made in the state. Wisconsin has been the top cheese producing state since 1910.
Stephen moved to Wisconsin in 1888 and began working as an agricultural chemist at UW-Madison. His boss, Dean Henry, asked Stephen to create a butterfat test that farmers, cheesemakers, and creamery owners could use on site.

Stephen set to work in his fourth-floor laboratory. He first set out to separate butterfat from milk so it could be measured. He learned that this could be done by adding acid to the milk.

**Roaring Laughter**

Stephen was known for being a joyful and pleasant person, as well as for having a hearty laugh. He even had the nickname “The Laughing Saint of Science.” While working at UW-Madison, Dean Henry could often hear Stephen’s laughter from four floors above him. He asked Stephen to try to control himself and set a better example for students. But Dean Henry learned it was impossible to control Babcock’s laughter. So he learned to enjoy Babcock’s merry spirit.
Next Stephen needed to measure the butterfat. He found that adding the acid to the milk and spinning it quickly brought the butterfat to the top of the flask. The fat could then be measured.

The dean wanted to tell the world about Stephen’s discovery. But Stephen was a perfectionist. He would not publish his results because the test worked for all the university cows but one named Sylvia. Dean Henry allowed Stephen to quickly improve the test. He soon succeeded. Stephen’s test was named the Babcock Test in July, 1890.
The Babcock Test was reliable and low-cost. Consumers in Wisconsin and around the world now trusted the dairy industry more. Modest Stephen did not want praise for his work. He created it to improve people’s lives, not for fame or fortune. The Babcock Test won many awards around the world, including grand prize at the 1900 World’s Fair in Paris, France. Stephen never accepted any money for his work.

**Wisconsin Idea**

Stephen Babcock did his work because he wanted to help better people’s lives. This belief is similar to the Wisconsin Idea.

The University of Wisconsin (UW) has followed the Wisconsin Idea since its beginning in 1848. The Wisconsin Idea is the belief that the university should develop programs and do research to help all Wisconsin citizens. The UW’s research should also be used to solve problems and improve health, quality of life, and the environment. The Wisconsin Idea is still followed on UW campuses.
Loving Life

Stephen liked living a simple, quiet life in his two-story home with his wife, May. He enjoyed munching peanuts while cheering on the home team at sports events. Stephen also loved car rides with his wife.

May died in 1927 when Stephen was 84. Friends urged him to move to a place he could receive care and help. But he wanted to stay independent. He walked from home to work and back daily and cared for his messy but beautiful garden.

Stephen Babcock married Mary (May) Crandall on October 27, 1896. The couple did not have any children.
Conclusion

Stephen died suddenly of heart failure on July 2, 1931.

His Babcock Test had improved the dairy industry. Stephen’s nutrition studies paved the way for discoveries like vitamins A and D.

Above all, he wanted to improve others’ lives. That inspired his work and did not end when he died. He willed money to one of the university’s libraries and for student scholarships. Babcock Hall and a home for students at UW-Madison are both named after him to honor the great things he did.

Wisconsin Historical Society. WHI-61310.

Stephen (above) did experiments to learn more about how food nutrition affects animals. His studies helped scientists like E.V. McCollum discover vitamin A and Harry Steenbock find vitamin D.

Wisconsin Media Lab. 2015.

Roads, buildings, and cities named in Stephen’s honor can be found throughout Wisconsin.
Today, Stephen’s name is famous for the ice cream made in Babcock Hall on campus. That is a fitting honor for Stephen Babcock, the curious, modest, and laughing man who found a way to measure butterfat and change an industry.

Stephen’s desire to help others motivated his work. What motivates you to accomplish your life goals?

Image courtesy of the UW-Madison Archives, S00111.

The Babcock Dairy Store was built on the UW-Madison campus in 1951. There, ice cream, cheese, and other dairy treats are made and sold.

Jeff Miller/University of Wisconsin-Madison.
butterfat (n): ............. the fat in milk; used to make butter
chemistry (n): ............. the scientific study of the elements and their interactions with each other
consumers (n): ............. people who buy and use products and services
engineering (n): ............. the science of design and building things such as roads, buildings, and machines
independent (n): ............. not needing or wanting help
laboratory (n): ............. a room or building people used for scientific research
modest (adj): ............. not proud or thinking better of oneself than others
perfectionist (n): ............. someone who does not tolerate flaws
scientist (n): ............. a person who is expert in one of the sciences