



DR. ROYAL LEE

FOUNDER OF STANDARD PROCESS



❧ INTRODUCTION ❧



Dr. Royal Lee, 1895-1967

This e-book will guide you through the stages of Dr. Royal Lee's life and provide you with a glimpse of the history and events that helped shape him. You can look forward to learning more about his pioneering vision, whole food philosophy, and mission to help transform lives.

RURAL ROOTS



*The young Royal Lee (right) with three of his sisters:
(from left) Ruby, Estella, and Lola*

Born in 1895, Royal Lee was the fourth of five children and was raised on a farm near Dodgeville, Wisconsin. There are many influences that could have shaped his future, but the loss of a 6-year-old sister to measles had a profound effect.

As a child, Royal had a tremendous desire to learn. An avid researcher, he devoured books on inventors, science, and chemistry; wrote journals; and kept notes on biochemistry and nutrition.

Meanwhile, the first published guidance on dietary advice in the U.S. Department of Agriculture Farmers' Bulletin does not yet mention specific nutrients and minerals. Some of the specific dietary guidelines we know today weren't yet discovered, much less recommended.

Fascinated with how the body works, he studied the endocrine and immune systems and how they affect health. He became well-versed in biology. Driven to learn, he taught himself physics from his older sister's schoolbooks and was later asked to teach his high school physics class.

This young biologist was also a hardworking farmhand who understood the land. He planted, plowed, and harvested crops.

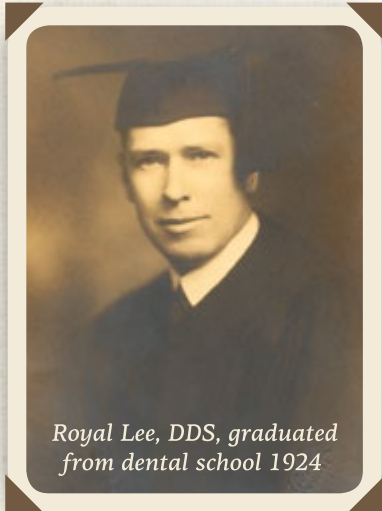
A budding engineer, Royal was known for his talent for fixing anything. It's said that he was always looking for a better way to fix machines. He would fix something, study it, and then find an even better way to make it work.

He may not have known it then, but he was beginning a journey that would carve out a whole new way to look at health and nutrition, a journey made all the more special by the fact that the word "vitamin" didn't even appear in the dictionary until 1912, the year before he graduated from high school. Royal Lee was to become a pioneer in the field of nutrition. His quest would ultimately create our company, Standard Process.



The young Royal Lee

APPLYING SYSTEMS THINKING TO NUTRITION



Royal Lee, DDS, graduated from dental school 1924

After finishing high school, Royal found jobs working with farm machines, cars, and motors. In 1918 he married Evelyn Egan and shortly after was called to military service. When Royal returned, he took a job teaching auto mechanics. Then he was hired by another company to analyze problems with electrical equipment.

The genius of Royal Lee was his ability to observe specific behaviors within complex machines or organic systems. He applied a systems-thinking approach to his inventions that addressed the problems by bringing balance to the whole system.

When he became extremely interested in a dental drill motor that needed a redesign, he knew that to understand this drill, he needed to think like a dentist. So he enrolled in Marquette University School of Dentistry in Milwaukee in the early 1920s. It's said that he had \$5 in his pocket at the time he enrolled.



Adjustable-speed motor with a governor



Single-speed governor

While at school, he focused on the negative impact that variability can have on the homeostasis of systems. It was this systems-thinking approach that enabled him to invent the first of his centrifugal governors, designed to measure, regulate, and maintain the speed of electrically driven motors. This unique invention earned him his first of many patents. He created the Lee Dental Drill and then went on to invent broader applications of motor/governor combinations for many more industries.

He applied this same systems thinking to his groundbreaking work in nutrition. Just as the Lee Governor could bring balance to mechanical systems, he recognized that nutritional supplements could possibly become a catalyst for balance for human biological systems.*

***These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure, or prevent any disease.**

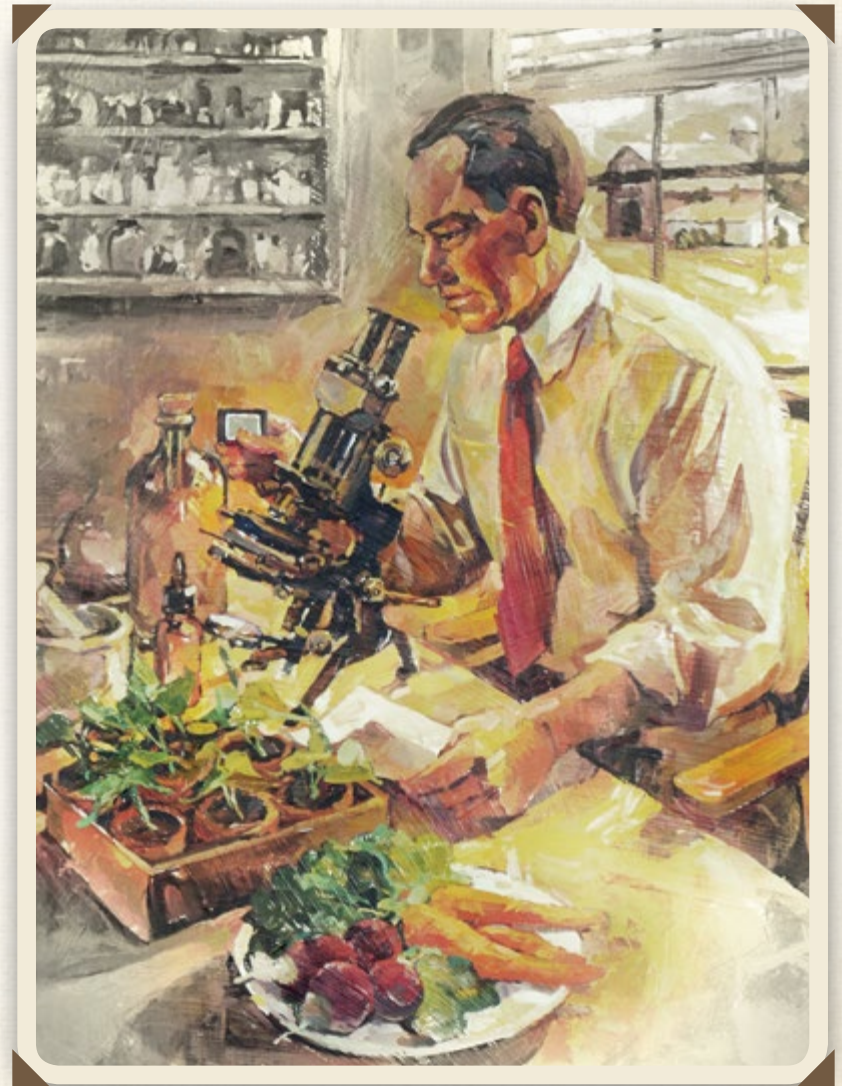
NUTRITIONAL RESEARCHER

Through his research in dental school, Dr. Lee saw firsthand what lack of proper nutrition could do to dental and physical health.

He wrote his senior thesis on the “Systemic Causes of Dental Caries.” In this paper, Dr. Lee highlighted the fact that it was more logical to try and prevent nutritional dental challenges than to fix them after they arise. His calling became clear, and his fervent search for solutions began.

As Dr. Lee worked on creating nutritional supplements, he discovered new techniques to help prepare vitamin and mineral concentrates. His goal was the development of processes that helped retain vital factors found in food.

At this time, public penny scales, which gave most people the first opportunity to weigh themselves, were dispersed throughout the United States. The popularity of these scales by the end of the 1920s suggests the growing belief that one should know his or her weight.



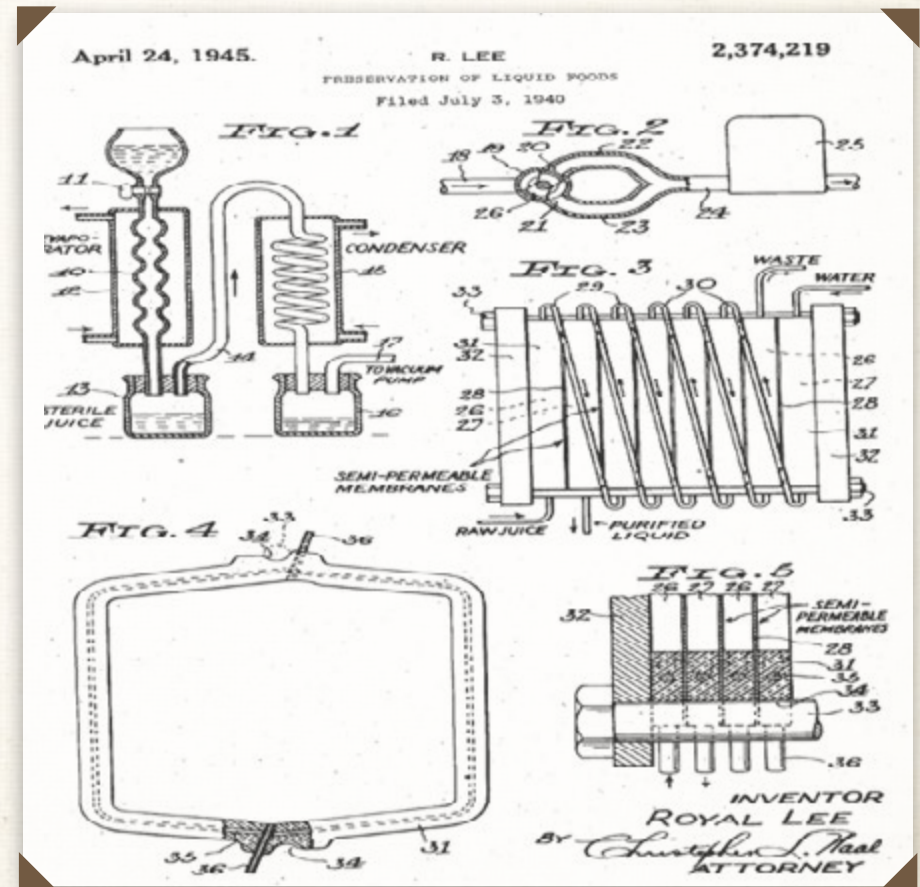
An illustrated depiction of Dr. Lee researching whole foods

INVENTIONS SUPPORT NUTRITIONAL RESEARCH

By the time Dr. Royal Lee graduated with a degree in dentistry in 1924, he had become an established inventor. Between 1926 and 1962 he filed for almost 70 patents that ranged from methods of cold-processing food products to his endocardiograph, which amplified and recorded heart sounds and was the predecessor of today's acoustic cardiograph. These patents helped finance his passion for nutrition.

10 of the Many Patents of Dr. Royal Lee

- » Motor controller (1924)
- » Speed governor for electric motors (1927)
- » Attrition mill (1931)
- » Electroacoustic apparatus (1942)
- » Preservation of liquid foods (1945)
- » Food product and process of making (1948)
- » Speed regulator (1950)
- » High-frequency dehydrating method and apparatus (1951)
- » Attrition-type flour mill with centrifugally controlled feeding means (1953)
- » Combined internal combustion and steam engine (1963)



Preservation of Liquid Foods Patent Diagram

LEE'S HOUSEHOLD FLOUR MILL



The original Lee Household Flour Mill

Concerned about retaining the vital factors in food, Dr. Royal Lee created the Lee Household Flour Mill™. In April of 1927, Dr. Lee filed for a patent that was granted in July of 1931.

The patent described his mill as an attrition mill for the manner in which wheat berries are pulverized by dashing the grain against a stationary disc. In his description of the mill, Dr. Lee wrote:

"A further object is to provide a grinding mill having a stationary abrasive member or stone against which the grain or other granular material to be ground is spun or whirled at high-speed by centrifugal action to effect rapid attrition of the material with a light touch."

This mill featured an automatic feed design invented by Dr. Lee and created a fine flour that didn't require sifting. The machine helped consumers avoid highly processed flours found in grocery stores. Dr. Lee felt that using a stone



The updated Lee Household Flour Mill available for purchase at www.organicsbylee.com

mill to grind the wheat and other grains retained vital nutrients in the food. By developing and selling these mills, Dr. Lee made nutritious flour available to consumers.

The updated Lee Household Flour Mill is available today from Royal Lee Organics™ at www.organicsbylee.com.

CATALYN®: THE PRODUCT THAT STARTED IT ALL

Catalyn, a unique, complex supplement made from natural sources, was produced by Dr. Royal Lee in 1929. Supplying multiple vitamins and naturally occurring minerals for complete, complex nutritional supplementation, Catalyn was designed to help bridge nutritional gaps in the diet.*

Dr. Lee's mother, friends, and family tried the supplement and were excited about it. In 1929, Dr. Lee started Vitamins Products Co., and Catalyn began to be sold in local pharmacies and health food stores. Dr. Lee received so much support from consumers, he decided to distribute Catalyn nationally. Impressed with the product and the quality and care put into making it, health care practitioners began selling Catalyn in their clinics.

By 1931 Catalyn was on its way to national distribution through health care practitioners, who were also carrying other supplements developed by Dr. Lee. Health care professionals are exactly who Dr. Lee wanted to sell his products, and this has remained the Standard Process policy to this day.

Dr. Lee started several companies as his product line evolved: Vitamin Products Co.; Therapeutic Foods Co. in 1931 to sell his product line to health care professionals; and Standard Process Laboratories, a division of Vitamin Products Co., in 1946 to sell Protomorphogen™ extract and Cytosol™ extract products.

Catalyn is still the key product for Standard Process, a true testament to Dr. Lee's legacy. Soon after Catalyn was introduced, the League of Nations issued a statement calling for improved nutritional education and a need for dietary standards.

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Dr. Lee designed and developed high-vacuum, low-temperature dryers and adapted special grinding mills to extract the complex nutrient content and retain the sensitive nature of the phytochemicals found in whole foods.

Catalyn as it is sold today

A VISIONARY'S CHALLENGES

Dr. Lee's passion for whole food nutritional supplements was a very new concept in the 1930s. His advertising became a concern to the U.S. Food and Drug Administration (FDA), who challenged his product claims. Dr. Lee believed strongly in his products and went to court to defend them. It was a long, drawn-out struggle that continued for years.

In 1941, Dr. Lee organized the Lee Foundation for Nutritional Research, headquartered in Milwaukee. This nonprofit corporation was created to support nutritional research and supply educational materials to medical professionals and the public.

Dr. Lee said this about his foundation:

"The Lee Foundation will support sound principles from whatever source derived and will oppose false principles and harmful practices and products, no matter how powerful or vindictive the organization which enunciates or uses them."

In 1942, the U.S. Office of Defense Health and Welfare Services recommended bread and cereal made from enriched white flour as part of a nutritional daily diet.

Today we know better. There is much more acceptance of the value of good nutrition and the use of nutritional supplements. Many of Dr. Lee's ideas about processed foods and the challenges of sugar have become accepted ideas.

A true innovator, Dr. Lee led the way. At Standard Process, we continue to share his dream and use his knowledge as a foundation.



*An illustrated depiction of Dr. Lee
on the Standard Process certified organic farm*

❧ AHEAD OF HIS TIME ❧



*An illustrated depiction of
Dr. Lee in his library*

Dr. Lee often spoke of the challenges of the consumption of over-cooked and processed foods. He stated the following in an address to the Seattle chapter of the American Academy of Applied Nutrition in 1949:

"We must take the trouble in our homes to prepare our foods from the basic materials as far as possible, even to the extent of growing our vegetables and fruits on properly composted soil if we can. The dividends will be quite possibly 20 years added to our life span, to say nothing of the life added to our years."

The processing of foods has only become more intricate today, but there are many who work to raise public awareness of the value of whole foods. Keeping Dr. Lee's philosophy in mind, we have our own certified organic farm where we grow many of our product ingredients.

Dr. Lee dedicated his life to finding solutions for all sorts of challenges, but his greatest passion was improving the nation's health by providing high-quality nutritional supplements made with whole food and other ingredients and educating others about them. He was respected by many health care professionals and made an impact on the health of patients across the country.



Dr. Lee often expressed thoughts that are familiar to us today but were way ahead of his time:

"Candy; all white sugar or its product; and white flour, including its products such as macaroni, spaghetti, crackers, etc., should be absolutely barred from the diet of the child. All these are energy-producing foods that contain no building materials for the body."

—Dr. Royal Lee, 1933

"One of the biggest tragedies of human civilization is the precedence of chemical therapy over nutrition. It's the substitution of artificial therapy over natural ..."

—Dr. Royal Lee, 1951

A vitamin is: "... a working process consisting of the nutrient, enzymes, coenzymes, antioxidants, and trace minerals activators."

—Dr. Royal Lee, 1956



*“Just as the chemist cannot
create life, neither can he create a
complex vitamin, the life element
in foods and nutrition. This is a
mystery the chemist has not solved
and probably never will.”*

—DR. ROYAL LEE



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