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## Luther Burbank: Plant Breeding Artist, Horticulturist, and Legend

Jules Janick<sup>1</sup>

Author Affiliations

### Abstract

Luther Burbank (1849–1926), the best-known horticulturist in the United States, was honored in 1940 by having a U.S. postage stamp in his honor—as a scientist! Burbank became a legend in his time as the plant inventor and horticultural wizard releasing a prodigious 800 new cultivars, a number of which are still being grown, the most famous being the ‘Burbank’ potato, the ‘Santa Rosa’ plum, and the ‘Shasta’ daisy. During his lifetime he was considered as a coequal with Henry Ford, inventor of the assembly line factory, and Thomas A. Edison, inventor of the light bulb and phonograph. Hugo de Vries, Liberty Hyde Bailey, and Nikolai Ivanovich Vavilov visited him and lauded his operation. Burbank promoted the concept that plant breeding could be the basis of a business and his headquarters in Santa Rosa, CA, became world famous. He established a publication company to disseminate his work and was instrumental in the eventual passage of the Plant Patent Act of 1930. However, Burbank was not a scientist. Although a strong supporter of Darwin and the theory of natural selection, he did not understand the contributions of Mendel to genetics and breeding. He performed no experiments in the classical sense and his notes were fragmentary. In 1904, he received a large grant from the Carnegie Institution (\$10,000 annually) to promote the scientific study of plant breeding, which was discontinued after 5 years when the reviewer, George Harrison Shull, determined that Burbank’s procedure was more art than science. However, Burbank is justly famous as a successful plant breeder. He intuitively followed the modern rationale of plant breeding by obtaining abundant diversity, using repeated and successive hybridization, and carrying out rigorous selection. Above all he had an eye and feel for plants. His success is an affirmation that plant

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breeding is an art as well as a science. As an innovative plant breeding artist, Luther Burbank remains an inspiration to plant breeders and horticulturists.

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