Debunking Soybean Myths and Legends in the Historical and Popular Literature

T. Hymowitz* and W. R. Shurtleff

ABSTRACT

The soybean [Glycine max (L.) Merr.] is one of humanity’s principle food crops. Unfortunately, the historical and popular literature concerning soybean is replete with factual errors that keep recycling from one publication or website to another without documentation. In this essay we attempt to correct the most egregious errors about soybean history. The earliest known introduction of the soybean into North America was by Samuel Bowen in 1765 and not Benjamin Franklin. A royal patent 878 was issued to Bowen for making soy sauce from Chinese vetches (soybean). The 1804 date cited as the oldest introduction of the soybean into the USA is clearly in error. George Washington Carver did not play an important role in the introduction of the soybean to the USA. The soybean is not one of the world’s oldest domesticated crops, has not been cultivated in China for more than 5000 yr (50 centuries), and Emperor Shennong is a mythical figure. The current oldest record for the soybean in China dates back to the 11th century BCE or perhaps a bit earlier.

The soybean is one of humanity’s principle food crops. Who, when, where, and how the soybean was domesticated in China and disseminated throughout the world is a fascinating story (Hymowitz, 1990). Unfortunately, the historical and popular literature concerning the soybean is replete with factual errors that keep recycling from one publication or website to another without documentation. We attempt to correct the most egregious errors about soybean history. Below we present each myth or legend as a statement followed by a response.

MYTH/LEGEND 1

Statement

The first mention of soybean in American literature was by James Mease in 1804 (Piper and Morse, 1916).

Response

In 1765, Samuel Bowen introduced Chinese vetches (soybean) into the Colony of Georgia. He obtained soybean seed in China (Hymowitz and Harlan, 1983). Henry Yonge, the Surveyor General of Georgia planted soybean on his farm at the request of Samuel Bowen in 1765 (Yonge, 1767). From 1766 on, Mr. Bowen planted soybean on his property “Greenwich,” located in Thunderbolt, GA, a few kilometers east of Savannah (Hymowitz and Harlan, 1983). In 1767, Mr. Bowen received a}

T. Hymowitz, Dep. of Crop Sciences, Univ. of Illinois at Urbana-Champaign, Urbana, IL 61801; W. R. Shurtleff, Soyfoods Ctr., P.O. Box 234, Lafayette, CA 94549. Received 15 Feb. 2004. Review & Interpretation. *Corresponding author (soyui@uiuc.edu).


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MYTH/LEGEND 3  
**Statement**  
Benjamin Franklin brought the first soybean to the USA from France (Vietmeyer, 1979).

**Response**  
According to Pailliéux (1880), packets of soybean seed from missionaries in China were received at the Jardin des Plantes, Paris perhaps as early as 1739 and were planted at yearly intervals. Swingle (1945) noted that Benjamin Franklin was a member of the French Academy of Sciences since 1772. In addition, he was the U.S. ambassador to France from 1776 to 1785. It is quite possible that Franklin had access to the soybean growing in Paris and that he sent them back to the USA. However, even if Franklin did send seed to the USA, the date would be much later than the 1765 soybean introduction of Samuel Bowen.

There is, however, a documented earlier introduction of soybean by Franklin. In a letter dated 11 Jan. 1770 (Smyth, 1907, p. 245–246), Franklin wrote the following to his friend John Bartram in Philadelphia about seeds used to produce tofu:

> I send also some green dry peas, highly esteemed here as the best for making pea soup and also some Chinese caravances with Father Navarrete’s account of the universal use of a cheese made of them in China which so excited my curiosity that I caused inquiry to be made of Mr. Flint, who lived for many years there, in what manner the cheese was made and I send you his answer. I have since learned, that some runnings of salt [I suppose runnet] is put into water, when the meal is in it, to turn it to curds. I think we have caravances with us, but I know not whether they are the same with here, which actually came from China. They are said to be of great increase.

The Father Navarrete referred to in Franklin’s letter is Domingo Navarrete, who in 1665 wrote about the Chinese use of tofu (Cummins, 1962). The Mr. Flint referred to by Benjamin Franklin was James Flint, the financial supporter of Samuel Bowen (Hymowitz and Harlan, 1983). Franklin erred in his identification of soybean as “Chinese caravances.” Commonly, the name is reserved for the chickpea (*Cicer arietinum* L.). John Bartram probably planted the soybean seed sent to him by Franklin in his garden, which was situated on the west bank of the Schuykill River below Philadelphia (Fox, 1919). However, Samuel Bowen introduced soybean in 1765, 5 yr earlier than Franklin’s soybean introduction.

MYTH/LEGEND 4  
**Statement**  
George Washington Carver played an important role in introducing the soybean to America (United Soybean Board, 1995).

**Response**  
A thorough analysis of all publications and letters of Dr. George Washington Carver revealed that he had only two research publications about soybean (Carver, 1901, 1937). The booklet containing the erroneous information about Dr. Carver was developed by a public relations firm under contract from the United Soybean Board. Whoever wrote the brochure confused the soybean with Dr. Carver’s wonderful research on the peanut (*Arachis hypogaea* L.) (McMurry, 1981). The United Soybean Board was unfortunately misled about the gross error in one of its publications.

MYTH/LEGEND 5  
**Statement**  
The annals of Old China set forth the fact that the soybean was an important food fully 5000 yr ago (Morse, 1918a).

> It has been cultivated in China, India, and Japan for more than 5000 yr and in extent of use and value is the most important legume now grown in these countries.

> —Morse (1918b)

**Response**  
William J. Morse was the soybean research leader of the USDA from 1907 to his retirement in 1949. (Hymowitz, 1984). The information about soybean history published in his articles was widely quoted in the soybean production literature. Since his publications, new information about soybean history has been uncovered and published. Unfortunately, Mr. Morse’s views concerning the antiquity of soybean domestication are still cited today and worse yet, not even given citation attribution.

Dr. Ping- ti Ho, a member of Academic Sinica and Professor of History at the Univ. of Chicago has authored many articles and books on Chinese history. In his classical article, “The Loess and the Origin of Chinese Agriculture” (Ho, 1969), and in his book, *The Cradle of the East* (Ho, 1975), he discusses the antiquity of soybean production in China.

The beginnings of the domestication of the soybean may never be exactly known except that the plant was probably first domesticated successfully in the eastern half of North China, probably not too much earlier than the eleventh century B.C.

**Furthermore**  
No trace of legumes has been found in any Neolithic site in North China or in records of Shang oracles. Not until Zhou times (ca. 1100 B.C.) did the soybean simultaneously appear in bronze inscriptions and *The Book of Odes*.

Professor Ho as well as Bray (1984) placed the domestication of the soybean around 3100 yr ago and not 5000 yr as suggested by Morse. Perhaps future archeological research in China will supercede the historical documentation by Professor Ho.

MYTH/LEGEND 6  
**Statement**  
“Soybean was perhaps one of the earliest crops grown by man.” (Morse and Carter, 1937).
Response

When Morse and Carter (1937) suggested that the soybean was an ancient crop, their guess was quite reasonable. However, in the past 65 yr, extensive archaeological and radiocarbon dating research has revealed that at least 30 crops are much older domesticates than the soybean, including rice (*Oryza sativa* L.), foxtail millet [*Setaria italica* (L.) P. Beauv.], wheat (*Triticum* spp.), maize (*Zea mays* L.), chickpea, lentil (*Lens culinaris* Medik.), common bean (*Phaseolus vulgaris* L.), squash (*Cucurbita pepo* L.), faba bean (*Vicia faba* L.), and Chile pepper (*Capsicum annuum* L.) (Cowan and In summary, in this essay we have attempted to trace back whatever possible the origin of the myths and legends concerning the history of the soybean and have proposed corrections. A major hurdle to correcting the myths and legends is that they are being recycled in the scientific and popular literature and websites as facts. We believe that it is important to correct these errors and place the historical role of the soybean in proper perspective. Perhaps in the future archaeologists in China will discover evidence that provides additional clues about the antiquity of the soybean. Thus, a reconstruction of the current soybean history is below:

The soybean is not one of the world’s oldest domesticated crops. Thus far, there are no archeological records that suggest the crop has been cultivated in China for more than 5000 yr. Antiquity of the crop has been ascribed to the efforts of Emperor Shennong, a mythical figure fabricated most likely by Han historians. The current oldest record for the soybean in China goes back to the 11th century BCE or perhaps a bit earlier.

The earliest known introduction of the soybean into North America was by Samuel Bowen in 1765. He grew soybean on his property “Greenwich,” a few kilometers east of Savannah, GA. A royal patent 878 was issued to him for making soy sauce from Chinese vetches (soybean). The 1804 date cited as the oldest introduction of the soybean into the USA is clearly in error. The soybean referred to in 1804 traces back to the introduction in 1765 by Samuel Bowen, who sent seeds from Georgia to the American Philosophical Society in Philadelphia for testing.

In 1770, Benjamin Franklin sent soybean seeds from England to his botanist friend John Bartram in Philadelphia. George Washington Carver played no major role in the development of soybean production in the USA.

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