

BOOKSHELF

‘Magic Bean’ Review: A Legume’s World Conquest

Though soybeans are unloved by American consumers, the U.S. is the leading global soybean producer. How did that happen? Marc Levinson reviews “Magic Bean” by Matthew Roth.

By Marc Levinson

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When the Trump administration announced in April that it would impose sweeping tariffs on imports from China, the Chinese government knew how to strike back. It threatened to slap a 25% tariff on U.S. soybeans and then canceled several incoming orders. It was no wonder that alarms rang out across the farm belt: American farmers planted 90 million acres of soybeans

last year, an area nearly the size of Montana, and roughly a fourth of their production ended up in China.

This isn't the first time soybeans have been wielded as weapons in a trade war, and it almost certainly won't be the last. As historian Matthew Roth makes clear in “Magic Bean: The Rise of Soy in America,” trade restrictions helped turn the United States into the leading soybean producer in the world, and America's own eagerness to use soybeans against trading partners has helped Brazil and Argentina become major competitors in the soybean market.

American farmers first planted soybeans in the 1850s, but in tiny quantities. Aside from Seventh-day Adventists, who promoted them as a healthy food, and Chinese and Japanese immigrants, who used them to make tofu, “Japan peas” attracted few takers. In any case, the limited number of varieties available for planting were poorly suited to U.S. climates and soils.

Turning soybeans into a major cash crop was the work of government. For several decades after its founding in 1862, the main activity of the U.S. Department of Agriculture was distributing seeds to farmers. A remarkable cast of USDA officials who dedicated their careers to improving soybeans marches across Mr. Roth's pages: David Fairchild, who in 1897 set up a network of missionaries, diplomats and agricultural scientists to collect Asian soybean samples; Frank N. Meyer, a Dutch-born plant breeder assigned to roam rural China between 1905 and 1908 gathering 44 previously unrecognized varieties of soybeans while fending off complaints from Washington that his expense reports were late; Yamei Kin, the first Chinese woman to earn a U.S. medical degree, whom the USDA sent to China in 1917 to study uses for soybeans; and Charles Piper and William Morse, a two-man team whose landmark 1923 book, "The Soybean," was instrumental in promoting the soybean's virtues. They took enormous pride in their work. "I see that my name has been immortalized in the christening of a humble, mottled bean," Meyer wrote Fairchild in 1907. "What a joy!"

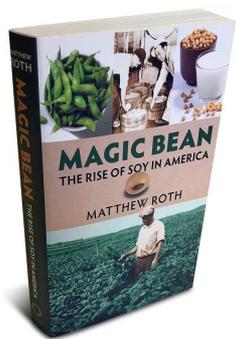


PHOTO: WSJ

MAGIC BEAN

By Matthew Roth

Kansas, 356 pages, \$24.95

To raise prices during the Depression, the Agricultural Adjustment Act of 1933 gave farmers an incentive to reduce their acreage of certain crops and to plant others instead, including soil-enriching soybeans. But what to do with the beans? A 10% tariff on imported oils, imposed in 1934, was meant to prop up domestic growers of oilseeds. As so often happens, though, Washington was working at cross-purposes: The federal levy on "artificially" colored margarine—often made from soybean oil—sheltered dairy farmers at the expense of soybean farmers. Most soybeans were thus harvested for seed, cut and baled as hay for cattle, or simply plowed under to improve the soil.

If Washington had few good suggestions for using the soybeans it was urging farmers to plant, Depression-era entrepreneurs were full of ideas.

"The soybean truly took off in what might have seemed the unlikeliest of times," Mr. Roth writes, "when the prospects for so much else in American life looked so bleak." Henry Ford became a tireless advocate, chasing the dream—never to be realized—of a car body made of soybean-based plastics. The German-trained Percy Julian, a pioneering African-American chemist, took charge of the soybean lab at Glidden Co. and filed a hundred patents on soybean technology. The Chicago Board of Trade created a soybean futures contract, allowing growers to hedge the risk of planting more beans. Output grew quickly, providing the raw material for the soy biscuits packed into soldiers' K-rations during World War II. When New York Gov. Thomas Dewey hosted a war-diet luncheon in 1943,

featuring chicken-and-soybean-sprout soufflé and soybean bread, thousands of patriotic housewives wrote to request recipes.

Soybean acreage quadrupled during the 1950s and 1960s, but it took Richard Nixon to reveal how essential this low-profile plant had become. Panicked by fast-rising inflation, Nixon prohibited the export of soybeans in June 1973. In an administration notable for bizarre economic policies, this was among the most insane. The hope was that a domestic soybean glut would lower the cost of feeding cattle and bring down the price of beef. Instead the short-lived embargo led Japanese buyers to protect themselves against an unreliable supplier by building a soybean industry in Brazil.

The lesson was not learned in Washington. In 1980, Jimmy Carter cut off grain and soybean exports to the Soviet Union to protest its invasion of Afghanistan. The result: Brazil shipped soybeans to the Soviets while American exporters sold to Brazil's regular customers. As Mr. Roth explains: "It ended up being an elaborate game of musical chairs." Nearly four decades later, Brazil exports more raw beans than the United States and trails only Argentina in exports of soybean meal and oil. And the market is global. If China no longer wants U.S. soybeans, more rounds of musical chairs may be in store.

As a food, soybeans still aren't much loved. When "The Simpsons" depicted daughter Lisa buying Soy Pops, "now with gag suppressant!," the show was confirming a widespread prejudice. But this once obscure legume has become the basis of a massive industry. Mr. Roth had given us a lively, well-researched tale of how this came about. It's worth reading even if you feel no great desire to try a soybean-sprout soufflé.

Mr. Levinson's most recent book is "An Extraordinary Time: The End of the Postwar Boom and the Return of the Ordinary Economy."

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