

# THE SUSTAINABILITY OF U.S. SOYBEAN MEAL

U.S. soybean meal sustainability means doing more with less. And that's what soybean meal does by providing its effective bundle of nutrients—amino acids, energy and choline—in a convenient and continuously improving package.

U.S. soybean farmers have increased their use of conservation tillage from 56 percent of their acreage in 2000 to 76 percent in 2016. The combination of increased conservation tillage for soybeans and growth in soybean acres has resulted in America's soybean farmers adding 21.8 million acres to the nation's acreage under conservation tillage.

Conservation tillage saves a lot of energy. Back in 1980 the average energy use per bushel of soybeans was 72,000 BTUs per bushel. By 2016 energy use had fallen over 50 percent to 34,700 BTU/bushel.

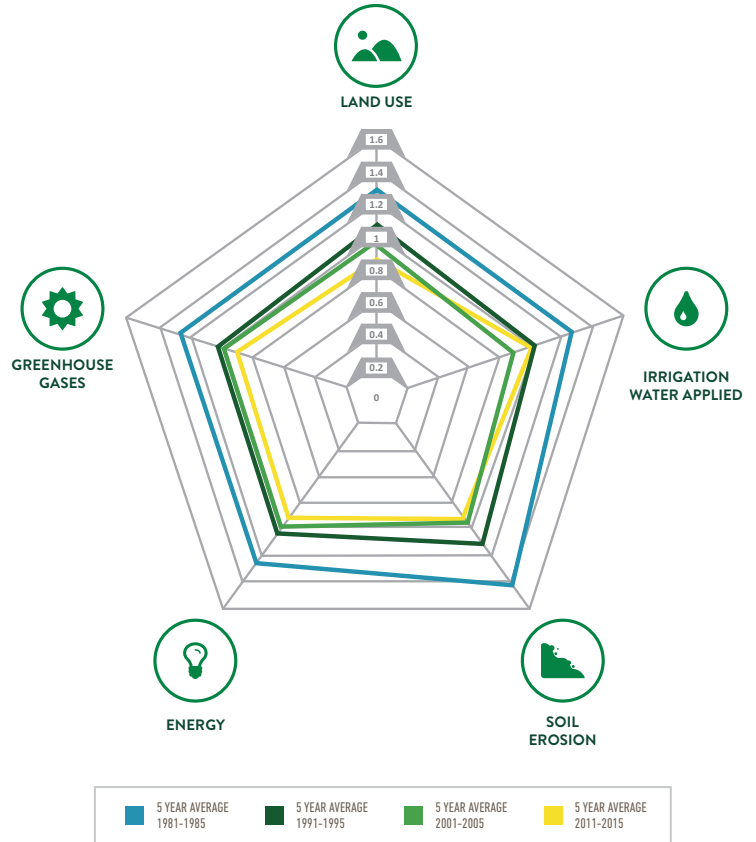
Conservation tillage also makes a huge difference in soil erosion. In 2016, U.S. soybean farmers had reduced soil erosion for per acre of soybeans grown by over 25 percent compared to 1980.

## INDEX OF PER BUSHEL RESOURCE IMPACTS TO PRODUCE SOYBEANS (U.S. YEAR 2000 = 1)

YEAR	2015*	UNIT - PER BUSHEL
Land Use	0.02	Planted Acres
Soil Erosion	4.18	Tons
Irrigation Water Applied	0.76	Acre Inches
Energy	45,277	BTUs
Greenhouse Gases	8.01	Pounds CO <sub>2</sub> Equivalent

\*5 year Average 2011-2015

Note: Data are presented in index form, where the year 2000 = 1 and a 0.1 point change is equal to 10% difference. Index values allow for comparison of change across multiple dimensions with differing units of measure.



And better management has improved farmers' ability to raise more soybeans using less water and land while reducing pollution and pesticide use. Irrigated water use per bushel has dropped by a third since 1980. The amount of land required to grow a bushel of soybeans has dropped over 50 percent in that same time period. And greenhouse gas (GHG) emissions per bushel have fallen nearly 50 percent.

Most farms and ranches in the U.S. are family owned and operated. To stay on those farms and ranches doing more with less becomes a way of life, whether it is continuous improvement of the soil, or ways to reduce energy and pesticide use. We've made some good progress and we're working to continuously improve.



For more information visit [www.soymeal.org](http://www.soymeal.org) or contact: Philip Lobo, SmithBucklin/United Soybean Board (314) 579-1582 or [plobo@smithbucklin.com](mailto:plobo@smithbucklin.com).