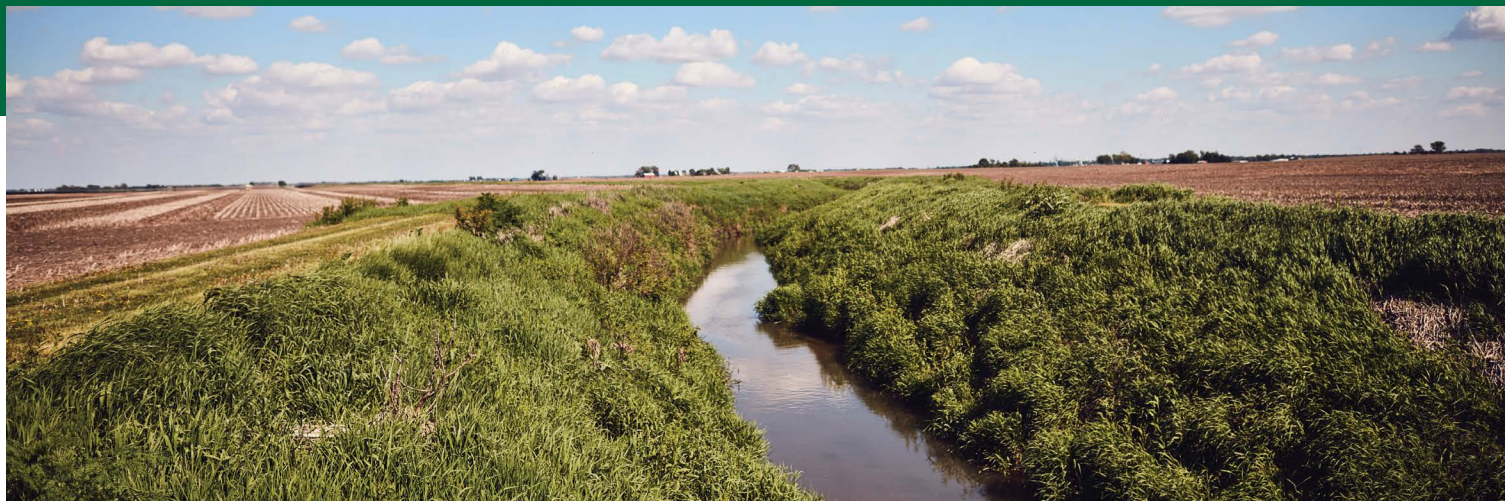


# U.S. soybean farmers make production decisions to protect water quality



Water is a vital part of any agricultural production system, and proper management is essential to conserve its use and control its movement.

## WATER QUALITY PRACTICES

Water can become the vehicle for soil erosion and nutrient run off. U.S. soybean farmers are doing their part to ensure their place in the water cycle has a positive impact. Where beneficial, farmers incorporate water conservation practices, such as:



**Buffer strips** on field edges, along streambeds and other water sources, to slow rain or irrigation water movement out of the field and to filter sediments and nutrients before they reach surface water sources.



**Grass waterways** that can slow excess rainwater and direct its movement through the field.



**Field terraces** that collect excess rainwater into drains that move it safely off the field.

Since 2012, the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service Water Quality Initiative (NRCS) has partnered with thousands of farmers to enact soil conservation practices on more than 1,190,000 acres in priority watersheds.<sup>1</sup> In 2020 alone, NRCS invested more than \$30 million in this Water Quality Initiative, expanding water quality protection in vulnerable watersheds.<sup>3</sup> The USDA's Wetland Conservation Provisions are designed to help farmers preserve the environmental functions of wetlands, such as flood and sediment control, groundwater recharge, water quality and wildlife habitat.

Just as managing water movement from the field plays a key role in controlling soil erosion, **nutrient management** prevents crop inputs from leaving the field, further protecting water quality. Soybeans rarely need nitrogen applications, but they do benefit from potassium and phosphorous. And phosphorus contributes to eutrophication and algal bloom in water sources if allowed to leave the fields where it is applied. So making sure nutrients are applied carefully and used efficiently is key to a sustainable farming operation.

Many soybean growers integrate the **4 Rs of Nutrient Stewardship**. This framework supports proper nutrient applications to improve sustainability and farm profitability:



Yet another important aspect of protecting water quality is the **efficient use of irrigation water**. Most U.S. soybeans do not require irrigation, only 8% of U.S. soybeans are irrigated.<sup>2</sup> Farmers who manage irrigated production also use soil probes, sensors and other technologies to minimize their reliance on irrigation to optimize their crop.



U.S. soybean farmers are using in-field and edge-of-field practices to make sure that their place in the water cycle has a positive impact. Water quality and quantity is an important aspect identified in the U.N. Sustainable Development goals (SDG). The use of these farming practices also contributes to the U.S. Soy farmers long-term impact on many of the U.N. Sustainable Development Goals (SDG), especially SDG 2—Zero Hunger. Specifically, SDG Target 2.4, says, “By 2030, ensure sustainable food production systems and **implement resilient agricultural practices** that increase **productivity** and production, that help maintain ecosystems, that strengthen capacity for **adaptation to climate change**, extreme weather, drought, flooding and other disasters and that **progressively improve land and soil quality**.”

<sup>1</sup> “National Water Quality Initiative.” Natural Resource Conservation Service. <https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/water/?cid=stelpdb1047761>

<sup>2</sup> “Soybean Irrigation.” Soybean Research & Information Network, August 6, 2020. <https://soybeanresearchinfo.com/agronomics/soybean-irrigation/>

<sup>3</sup> U.S. Environmental Protection Agency. (2021, June). Planning and implementing agricultural water quality projects through the National Water Quality Initiative: A practitioners guide (Final 508-revised). [https://www.epa.gov/sites/default/files/2021-06/documents/nwqi\\_practitioners\\_guide\\_-\\_final\\_508-rev\\_0.pdf](https://www.epa.gov/sites/default/files/2021-06/documents/nwqi_practitioners_guide_-_final_508-rev_0.pdf)

#### About The U.S. Soybean Export Council (USSEC)

**Soybeans are the United States' No. 1 food and agricultural export.** The U.S. Soybean Export Council (USSEC) is focused on building preference, improving the value, and enabling market access for the use of U.S. Soy for human consumption, aquaculture, and livestock feed in 90 countries across the world. USSEC is a dynamic partnership of U.S. soybean producers, processors, commodity shippers, merchandisers, allied agribusinesses, and agricultural organizations; and connects food and agriculture industry leaders through a robust membership program. USSEC is farmer-funded by checkoff funds invested by the United Soybean Board, various state soybean councils, the food and agriculture industry, and the American Soybean Association's investment of cost-share funding provided by U.S. Department of Agriculture's (USDA) Foreign Agricultural Service (FAS). To learn more, visit [www.ussec.org](http://www.ussec.org) and [www.ussoy.org](http://www.ussoy.org), and engage with us on USSEC's LinkedIn, X, Facebook, and U.S. Soy's LinkedIn, X, Facebook, Instagram and YouTube.