

## ABOUT THE MEMBER

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**Name of member**

U.S. Grains Council

**Date of foundation**

1960

**Web Address**

<https://grains.org/>

**Social media handles**

#usgrains

#usgrains23

#grains23

#ethanol

#corn

#sorghum

#barley

#DDGS

#harvest23

#harvest

## ABOUT THE SECTOR

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### Brief description

Cereal grains are small, hard, dry seeds harvested for human or animal consumption. They are commonly milled for food or feed, with a germ that can be pressed for oil.

Grain has played a critical role in human civilization for more than 10,000 years. While there are hundreds of grain species, maize, barley and sorghum are among the most important grains produced in modern times.

Grains are well suited to modern industrial agriculture. They are high yielding and can be mechanically harvested. After being harvested and dried, grains are extremely durable. They can be easily warehoused and stored for long periods of time, as well as transported by road, rail or ship. These valuable characteristics have allowed the development of today's modern global commodity markets.

The U.S. Grains Council develops export markets for U.S. barley, corn, sorghum and related products including distiller's dried grains with solubles (DDGS) and ethanol. With full-time presence in 28 locations, the Council operates programs in more than 50 countries and the European Union.

The Council believes exports are vital to global economic development and to U.S. agriculture's profitability.

Source: USGC Importer Manual

([https://grains.org/importer\\_\\_manual/importer-manual/](https://grains.org/importer__manual/importer-manual/)) and [www.grains.org](http://www.grains.org)

### **Estimated acres farmed (if relevant)**

Corn (93.2 mill. acres), Sorghum (6.6 mill. acres) and Barley (2.9 mill. acres) cover in total approximately 118 million acres of land in the United States, equivalent to 46% of the top 10 major crops grown in the U.S. (which include cotton, oats, rice, soybeans, sugar beets, sugarcane and wheat).

Source: USDA Farm Service Agency, Crop Acreage Data 2023 (as of October 2, 2023)

<https://www.fsa.usda.gov/news-room/efoia/electronic-reading-room/frequently-requested-information/crop-acreage-data/index>

### **Number of businesses**

183

### **People employed [directly/indirectly]**

Approximately 100

### **Annual output [eg tonnes of grain]**

Corn: 348.37 million metric tons (Mmt) | Sorghum: 4.77 Mmt | Barley: 3.81 Mmt

Source: USDA World Agricultural Production (Nov 2023).

### **Value of sector**

Corn; \$92 billion | Sorghum (\$2.66 bill est. 2021) | Barley (\$1.27 bill. est 2021)



Source: World of Corn, NCGA,

<https://ncga.com/world-of-corn-iframe/#us-select-crop-value>

<https://ncga.com/world-of-corn-iframe/#us-corn-at-a-glance>

### % of global market

MY22/23 Corn (30.1% = 348.37Mmt / 1157Mmt) | Sorghum (8.6% = 4.77Mmt /55Mmt) |  
Barley (3.5% = 3.81Mmt/ 151.54Mmt) Source: USDA World Agricultural Production (Nov  
2023)

### Export value (\$)

MY22/23: Corn (\$13.17 bill.) | Sorghum (\$904 mill.) | Barley (\$287 mill.)

Source: USGC, Grain in all forms tool,

<https://grains.org/markets-tools-data/tools/feed-grains-in-all-forms-portal/>

## **ABOUT SUSTAINABILITY**

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### Vision/mission statement

U.S. Grains Council Mission: Developing Markets | Enabling Trade | Improving Lives

### Key areas of focus

The U.S. Grains Council is committed to contributing to global climate efforts by working with its members and international stakeholders to address sustainability challenges in the food, feed, fuel and fiber international supply chains in which the products it represents trade.

The Council supports the climate goals established by member and sister organizations representing corn, sorghum and barley products, and will serve as a bridge and facilitator between national and international stakeholders to help achieve them.

The Council's goal is to increase the volumes of sustainably-produced U.S. grains that reach international markets to support global food security and climate-smart international supply chains.

## CORN

U.S. Corn farmers are committed to continuous improvement in the production of corn, a versatile crop providing abundant high-quality food, feed, renewable energy, biobased products and ecosystem services. As stewards of the land, we understand the responsibility we have for creating a more environmentally and economically sustainable world for future generations with transparency and through continued advances and efficiencies in land, water and energy use.

Source: National Corn Growers Association, Sustainability Commitment

Corn farmers are committed to creating a more environmentally and economically sustainable world for future generations with transparency and through continued advances and efficiencies in land, water and energy use.

The National Corn Grower's Association 2030 goals reflect the industry's commitment to sustainability, which includes a reduction in land-use impact by 12%, a reduction in soil erosion of 13%, an increase in irrigation water use efficiency of 15%, an increase in

energy use efficiency of 13% and a reduction in GHG emissions of 13% - all against a 2020 baseline.

## SORGHUM

The U.S. Sorghum Industry is committed to:

- \* Gathering the evidence and creating the resources for a comprehensive understanding of sorghum's sustainable qualities and how they positively contribute to broader climate priorities in markets and policies.
- \* Utilizing and enhancing—through our commitment to research and innovation—sorghum's inherent attributes, including its natural heat tolerance, hardy habitat-covering and erosion-controlling stalks, extensive soil health-promoting root systems and ability to produce with one-third less water than comparable grains, to drive industry and farm-level commitment to sustainability for real and measured impacts on ecosystems that build resilient landscapes.
- \* Leveraging sorghum's resource-conserving characteristics and showcasing sorghum farmers' resource-conserving practices to elevate the recognition of sustainable, domestically-produced food, fuel and feed ingredients, which meet consumer demand for climate-smart commodities.
- \* Using food aid to address the needs of food-insecure populations in unstable parts of the world to solve complex and connected issues surrounding childhood hunger, food scarcity and a changing climate.
- \* Annually assessing the U.S. sorghum industry's climate commitments to incorporate newly available data that enables the industry's continuous improvement.



## BARLEY

\* Sustainability is inherent for barley growers, many of whom have years of experience working the land on family farms that have operated for generations. Barley growers rely on healthy soil and water and continuous improvements to remain competitive, productive and profitable, which is why they invest in a range of stewardship and best-management practices reinforced by lenders, federal farm support programs and crop insurance.

U.S: Barley growers assess and measure environmental impacts of barley production through multi-stakeholder platforms such as Field to Market, supporting and advocating for voluntary conservation programs to incentivize growers to implement additional practices to conserve resources and improve environmental outcomes on working lands.

Barley growers are committed to enhancing resiliency in their operations.

### **Accomplishments with historic/trend data**

## CORN

U.S. corn farmers are committed to continuous improvement in the production of corn, a versatile crop providing food, feed, renewable energy, bio-based products and ecosystem services. As stewards of the land, corn farmers understand the responsibility they have for creating a more environmentally and economically sustainable world for

future generations via transparency and through continued advances and efficiencies in land, water and energy use.

Data from F1M National Indicators Report 2021: Corn for Grain

From 1980 through 2020, U.S. corn yields increased from 91 to 171 bushels per acre, an 88% increase unmatched by any other major world crop. This means vastly increased product availability, with minimal increases in land use.

From 1980-2020, irrigation water efficiency in corn production improved by 56%, in terms of acre inches per bushel. Recognizing the invaluable, life-sustaining force of water, U.S. corn farmers are increasingly adopting on-farm and edge-of-field water management practices.

Technological adoption by U.S. corn farmers has enabled energy reductions in the application, hauling and manufacture of various products associated to corn production from origination to farm. The amount of energy required to produce a bushel of corn decreased by 56% from 1980 through 2020.

U.S. corn production has achieved a reduction of 48% in GHG emissions (tons of CO<sub>2</sub>e per bushel) between 1980-2020. The adoption of biotechnology and practices such as conservation tillage, have contributed to the reduction in the carbon intensity and overall emissions associated to corn production.



Healthy soils are the foundation of all agricultural production, which is why corn farmers are committed to leaving their land in a better place than they found it. In the period from 1980-2020, U.S. corn farmers reduced soil erosion by ~40%, measured in terms of soil loss per acre.

Other citations from various sources (USDA and Congressional Research Service Reports):

Production methods such as cover crops, reduced-till and no-till planting greatly reduce environmental impacts such as energy consumption, soil loss, pesticide use and greenhouse gas emissions. Conservation tillage is now present in over 60% of planted corn acres.

Biotechnology is a critical tool used by U.S. corn farmers to produce safe, high-yielding, quality crops in varying growing conditions. It has enabled increased yields, reduced use of pesticides, fertilizers, fossil fuels and GHG emissions.

U.S. corn farmers are actively participating in government and supply-chain initiatives to increase the coverage of conservation practices such as reduced/no-till planting, cover cropping, terracing, nutrient and integrated pest management

Nature-based solutions are an additional tool being adopted by U.S. corn farmers, including the implementation of grassed waterways, prairie strips, cover crops, microbials, stream buffers, water-quality treatment wetlands

The adoption of innovative farming tools by U.S. corn growers include yield monitors, soil sensors, yield mapping, satellite guidance systems and the use of variable rate seeding, fertilizer, irrigation and plant-protection product applications

The increased use of GPS technology, guidance systems and yield monitoring tools contribute to optimized field conditions and lead to improved environmental performance in corn production. Adoption of other technologies such as machine section control, which fine tunes seed, fertilizer and spraying applications, helps minimize product overuse and reduces overall fuel consumption.

Ethanol reduces carbon emissions by 44-52 percent compared to gasoline, at the average 10% blend rate, the carbon equivalent of removing 12 million cars from the road each year. Ethanol displaces hydrocarbon substances like aromatics in gasoline and helps reduce emissions of air toxins, particulate matter, carbon monoxide, nitrous oxides and exhaust hydrocarbons.

### SORGHUM

From U.S. Sorghum Checkoff Sustainability Story (sources at <https://www.sorghumcheckoff.com/sustainability/our-sustainability-story/>):

Nationally, 91% of sorghum acres are rain-fed, which results in 1.5 trillion gallons of irrigation water savings per year

Sorghum farmers' use of conservation tillage methods in biofuel demand areas can reduce air quality harming erosion by more than 75%.

Sorghum stalks left standing in the field add nutrients back into the soil, break up soil compaction, help retain moisture and reduce effects of wind erosion, improving soil health.

Sorghum improves air quality by removing carbon from the atmosphere and safely storing it in the soil.

Sorghum-based ethanol is a clean-burning fuel that reduces particulate matter by 50% and has a lower cost of production compared to ethanol using other crops.

Sorghum offers valuable characteristics as it relates to wildlife conservation. Its stalks provide critical habitat and ideal winter cover for pheasants and quail.

Those responsible for growing sorghum in the U.S. are among the safest and most well-compensated workforces in the world.

Sorghum has been key to providing global food aid. Since 2010, more than 116 million bushels of sorghum have helped solve child hunger and food scarcity in developing countries.

#### BARLEY

From FtM National Indicators Report 2021: Barley

(<https://fieldtomarket.org/national-indicators-report/barley/>)



Energy use efficiency per acre of barley grown has improved steadily since 1990, which can largely be attributed to declines in energy use for management and are embedded in fertilizer production

Greenhouse gas (GHG) emissions per bushel of barley produced have declined over the last 40 years (1980-2020), while irrigation water-use efficiency increased along with energy use efficiency per bushel.

### **Comparison of standards with rest of world**

The U.S. Grains Council's (USGC's) Corn Sustainability Assurance Protocol (CSAP) Version 1.1 achieved Gold Level Equivalence against The Sustainable Agriculture Initiative Platform's (SAI Platform) Farm Sustainability Assessment (FSA) 3.0, a globally recognized framework and toolset aimed at promoting the continuous improvement of on-farm sustainability practices, that has benchmarked more than 100 programs across five continents.

The CSAP is a farmer-led initiative that highlights the strong institutional sustainability foundations underpinning U.S. agriculture, as well as the traditional and innovative techniques that U.S. corn producers are adopting daily. It was developed to allow international stakeholders interested in U.S. corn and corn products to learn about the commitment of U.S. growers to continue to adopt strategies and technologies to improve the sustainability of agricultural practices.

### **Current & future activities**

<https://grains.org/event/>



## COOPERATOR FACT SHEET



White Paper on Corn Sustainability:

<https://www.cmegroup.com/articles/2023/corn-sustainability-in-the-united-states.html>