



SORGHUM

Kansas leads the nation in sorghum production. Sorghum is a versatile, multiuse crop well suited for Kansas agriculture. Sorghum is among the most efficient crops in conversion of solar energy, use of water, and drought resilience. Grain sorghum has traditionally been used for livestock feed and in the production of ethanol, both for domestic and international markets. Sorghum is gaining popularity in food products as a nutritious whole grain and is utilized in the production of snack foods and pet food products. State and national sorghum advocacy organizations provide strong leadership for sorghum cropping and usage domestically and worldwide. Ongoing research is creating even more possibilities for the sorghum industry.

Although sorghum's advantages are numerous, some challenges still exist to realizing sorghum's full potential. The export market is a significant part of the sorghum industry, with China as the largest

buyer. Costs associated with transportation and risk management, particularly international and specialty markets, can be burdensome to producers. Pet food and food-grade sorghum remains a very small percent of Kansas sorghum production, which is a key priority area for development to fully capitalize the potential of those premium markets.

Success of a long-term growth strategy to expand the impact of sorghum in Kansas will rely on input and discussion among key partners in the industry. The Center for Sorghum Improvement, a centralized research center, promotes innovations for all segments of the sorghum industry and builds additional research partnerships. Statewide support for producers within the sorghum sector is welcome. Overall, collaboration between public and private stakeholders of sorghum is important in the development and execution of a strategic growth plan.

Status

Sorghum — a grain and forage crop — is among the most efficient crops in the conversion of solar energy and use of water. Sorghum is known as a high-energy, drought-tolerant crop. In the livestock market, sorghum is used in the poultry, beef, and pork industries. Stems and foliage are used for green chop, hay, silage, and pasture. A significant amount of U.S. sorghum is also exported to international markets where it is used for animal feed, ethanol, and other uses. The sustainable attributes of sorghum extend to benefits for soil health and the potential for carbon-positive cropping.

In the United States, 187.8 million bushels of sorghum were harvested in 2022. In 2022, sorghum was planted on 3.3 million Kansas acres with 105.3 million bushels harvested. Of the 28 sorghum-producing states, Kansas ranks first in sorghum production followed by Texas, Oklahoma, and Colorado. According to estimates prepared by the Kansas Department of Agriculture and based on the IMPLAN economic data model, the sorghum industry in Kansas has a direct output of approximately \$1.48 billion and creates 3,192 jobs in the state. Through indirect and induced impacts, the industry supports a total of 9,448 jobs and creates a total economic contribution of approximately \$2.7 billion.

The Kansas Grain Sorghum Commission, in partnership with U.S. Grains Council and the Kansas Department of Agriculture, increased the number of inbound and outbound trade missions developing and further strengthening global relationships for the state's sorghum farmers and agribusinesses. A pipeline was also developed to fill state leadership transitions as well as support Kansas representation with strategic placement on national sorghum leadership boards, such as the United Sorghum Checkoff. The commission has additionally increased education and outreach by coordinating and hosting sessions to mitigate pest tolerance and launching an educational podcast series and supports a successful fellowship program to energize and support young talent in agriculture.

Sorghum is gaining popularity in food products in the U.S. because of its gluten-free, non-GMO, and ancient grain properties. Sorghum is a suitable substitute for wheat, rye and barley for those who cannot tolerate gluten. Sorghum can be milled and is used to make both leavened and unleavened breads. In Sahelian, Africa, it is primarily used in couscous. Various fermented and unfermented beverages are made from sorghum. The grain can be steamed or popped and is consumed as a fresh vegetable in some areas of the world. Syrup can also be made from sweet sorghum.

Successes

- In June 2023, K-State announced the Global Collaboration for Sorghum and Millet, a new program on campus focused on value-chain growth and stability for sorghum and millet through active knowledge transfer and exchange of resources. Also in June, the Export Sorghum seminar held in Houston, Texas, led to several new direct sales of Kansas sorghum to international buyers.
- The Collaborative Sorghum Investment Program works to facilitate the testing and transfer of crop breeding tools and genetic markers, to rapidly introgress tolerance to sugarcane aphid into commercial sorghums. CSIP also is investing in the development of novel quality feed grain sorghums, with high value protein and starch traits.
- In 2022, K-State sorghum lines were utilized by five different sorghum breeding programs, with 50-60% of new commercial sorghum hybrids released this year developed with KSU markers.
- In July 2022, the USDA added sorghum to its Food Buying Guide for Child Nutrition Programs, a primary resource used by school food service directors to build menus that comply with USDA nutrition requirements. Both KDA and Governor Laura Kelly wrote letters of support encouraging USDA Secretary Tom Vilsack to include sorghum products in the buying guide.
- KDA, K-State, CSIP and Kansas Wheat partner to execute a USDA AMS Federal State Market Improvement grant. This grant creates an innovation experience for college students, the collegiate food service programs and farmer leadership of sorghum and wheat. FarmUS is a farm to campus initiative centered on a class experience to develop innovative new food products with Kansas commodities for use in food service and dining on college campuses in Kansas.