# TENNESSEE AGRI-INDUSTRY BRIEF: SOYBEAN PRODUCTION FACT SHEET

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## BACKGROUND

Soybeans are widely grown in Tennessee. County-level harvested soybean acreage, production and yields for 2023 are shown in Figures 1, 2 and 3, respectively. Preliminary U.S. state-level marketing year average soybean prices are indicated in Figure 4. For Tennessee in 2023, the state-level marketing year average price was \$12.70/bushel (USDA/NASS, 2024a).



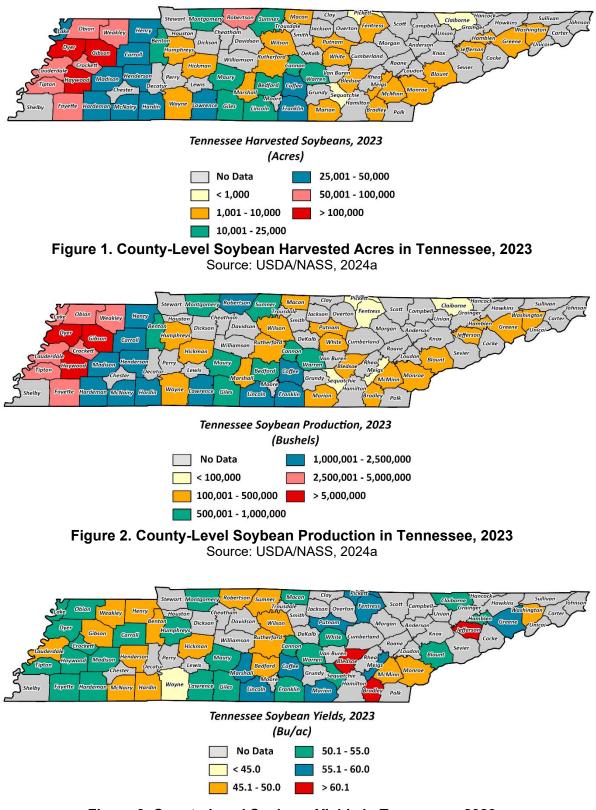


Figure 3. County-Level Soybean Yields in Tennessee, 2023 Source: USDA/NASS, 2024a

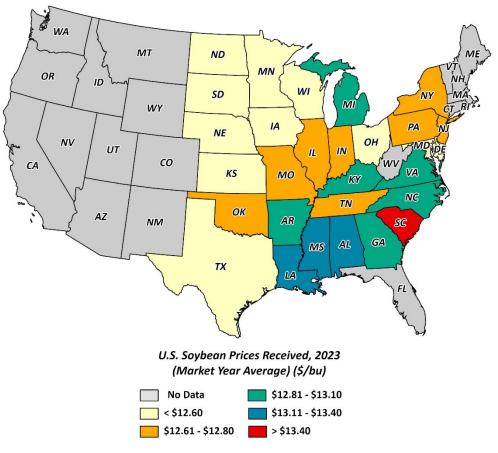


Figure 4. U.S. State-Level Soybean Prices Received, 2023 Source: USDA/NASS, 2024a

### ECONOMICS

#### CASH RECEIPTS

For Tennessee's agricultural producers in 2022, soybean cash receipts at \$1,094.7 million was the highest ranked agricultural commodity produced in the state. Compared to other states for 2022, Tennessee ranked 16<sup>th</sup> in cash receipts from soybeans (USDA/ERS, 2023).

#### MULTIPLIER EFFECTS

Accounting for all oilseed farming<sup>1</sup> for the state, and including multiplier effects, the industry in 2022 contributed an estimated \$1.5 billion in economic activity.<sup>2</sup> This economic activity was comprised of an estimated 7,698 individuals working part- or full-time in industries that support oilseed farming with a labor income of \$264.2 million. The 2022 economic activity and employment multipliers were 1.43 and 1.35, respectively. If soybean production increased total industry output (economic activity) by \$1 million, the state's economy would increase by an estimated \$0.43 million overall, and for each job supported in the same industry, an estimated 0.35 jobs would be supported in other industries. Soybean and other oilseed processing and fats and oils refining and blending in 2022 contributed an estimated \$5.9 billion in economic activity and was comprised of over 8,800 employees, with a labor income of \$485.4 million (IMPLAN Group, LLC, 2022).

### TRADE

Bulk agricultural trade for Tennessee's soybeans in 2022 totaled \$8.8 million. Japan was Tennessee's largest trading partners for soybeans. Soybean oil exports totaled \$5.6 million, with Panama and the Bahamas major trading partners. Soybean meal exports total \$320,000, with Argentina the major trading partner (USDA/FAS, 2023).<sup>3</sup>

#### SOYBEAN PRODUCTION

Tennessee's planted and harvested soybean acreage from 2013 to 2023 are displayed in Figure 5. The average total planted and harvested acreages were 1,622,727 and 1,591,818 acres, respectively. Tennessee soybean production for that same time frame is displayed in Figure 6. Average production was 76.0 million bushels. From 2013 to 2023, Tennessee soybean yields averaged 47.7 bushels per acre (Figure 7), with a marketing year average price

<sup>&</sup>lt;sup>1</sup>Primarily soybeans.

<sup>&</sup>lt;sup>2</sup>Calculations based on IMPLAN's 2022 direct value of production of \$1,075.8 million, which includes on-farm consumption and is net of inventory changes. IMPLAN's oilseed farming corresponds to NAICS codes 111110, 111120 and 1111191 establishments primarily engaged in oilseeds (e.g., soybeans, canola, sunflower, etc.) (US Census Bureau, 2023). <sup>3</sup>USDA/FAS state export data limitations for agricultural shipments: 1) origin of movement is not necessarily the transportation origin (inland state intermediaries shipping agricultural commodities down the Mississippi River to the port in New Orleans may report Louisiana as the state of origin of movement, resulting in understating exports from agricultural states and overstating exports for others); and 2) consolidated shipments will reflect the state of origin where consolidated (USDA/FAS, 2023).

of \$10.93 per bushel (Figure 8). Compared to other states for 2023, Tennessee ranked 17<sup>th</sup> for harvested acreage. The state ranked 16<sup>th</sup> in soybean production and 11<sup>th</sup> in yields for that time frame. Illinois ranked first in harvested acreage, production, and yields (USDA/NASS, 2024a & 204b).

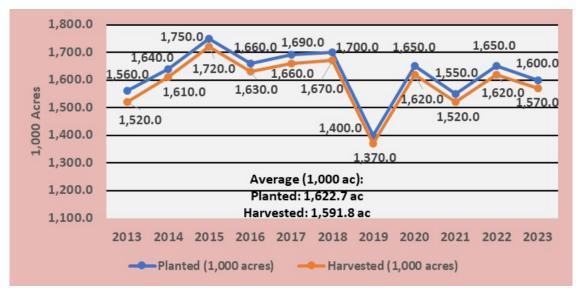


Figure 5. Tennessee Planted/Harvested Soybean Acres, 2013-2023 (Source: USDA/NASS, 2024b)

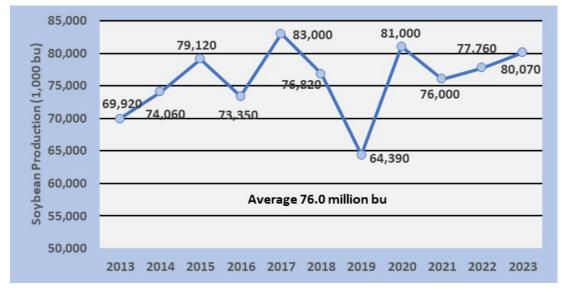


Figure 6. Tennessee Soybean Production, 2013-2023 (Source: USDA/NASS, 2024b)

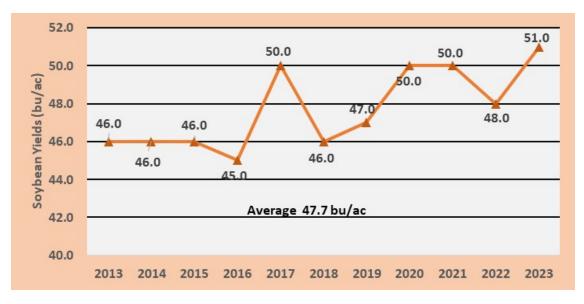


Figure 7. Tennessee Soybean Yields, 2013-2023 (Source: USDA/NASS, 2024b)



Figure 8. Tennessee Marketing Year Average Soybean Prices Received, 2013-2023 (Source: USDA/NASS, 2024a)

## SOYBEAN PRODUCTION SUGGESTED READING

#### FIELD CROP BUDGETS

Smith, A., and B. Bowling. 2023. "Field Crop Budgets for 2023." University of Tennessee Extension, Department of Agricultural and Resource Economics. D 33. Available at <u>extension.tennessee.edu/publications/Documents/D33.pdf</u>.

Current Weekly Crop Comments and Market Highlights Information. Available at arec.tennessee.edu/extension/crop-economics.

#### CROP ECONOMICS

Bowling, B., and A. Smith. 2023. "2022 Planted Acreage for Corn, Cotton, Grain Sorghum, Soybeans and Wheat in Tennessee by County." University of Tennessee Extension, Department of Agricultural and Resource Economics. W 442. Available at <u>extension.tennessee.edu/publications/Documents/W442.pdf</u>.

Smith, A., and B. Bowling. 2022. "Tennessee Cropland, Irrigated Cropland and Pastureland Cash Rental Rates for 2023." University of Tennessee Extension, Department of Agricultural and Resource Economics. W 377. Available at <a href="https://extension.tennessee.edu/publications/Documents/W377.pdf">https://extension.tennessee.edu/publications/Documents/W377.pdf</a>.

Duncan, H., B. Bowling, and A. Smith. 2023. "Regional Tennessee Corn and Soybean Basis." W 1091. Available at <u>extension.tennessee.edu/publications/ Documents/W1091.pdf</u>.

#### IRRIGATION

Leib, B., and T. Grant. 2019. "Irrigation Water Management (IWM) – A Simple Analogy." University of Tennessee Extension, Department of Biosystems Engineering and Soil Science. W 809-A. Available at <u>extension.tennessee.edu/publications/Documents/W809-A.pdf</u>.

Leib, B., T. Grant, A. McClure, and A. Shekoofa. 2019. "The Basics of Soybean Irrigation in Tennessee." University of Tennessee Extension, Departments of Biosystems Engineering and Soil Science and Plant Sciences. W 809-B. Available at <a href="https://extension.tennessee.edu/publications/Documents/W809-B.pdf">https://extension.tennessee.edu/publications/Documents/W809-B.pdf</a>.

## REFERENCES

- IMPLAN Group LLC, IMPLAN System (2022 data and Cloud Platform V. 7.0 software), 16905 Northcross Dr., Suite 120, Huntersville, NC 28078. Available at <u>implan.com</u>.
- U.S. Census Bureau. 2023. North American Industry Classification System. Available at <u>census.gov/naics</u>.
- U.S. Department of Agriculture, Economic Research Service (ERS). 2023. Data Files: U.S. and State-Level Farm Income and Wealth Statistics. "Annual Cash Receipts by Commodity, U.S. and States, 2008-2023F." Available at <u>ers.usda.gov/data-products/farm-incomeand-wealth-statistics/data-files-u-s-and-state-level-farm-income-and-wealth-statistics</u>.
- U.S. Department of Agriculture, Foreign Agricultural Service. 2023. Global Agricultural Trade System. Available at <a href="mailto:apps.fas.usda.gov/gats/ExpressQuery1.aspx">apps.fas.usda.gov/gats/ExpressQuery1.aspx</a>.
- U.S. Department of Agriculture, National Agricultural Statistics Service (NASS). 2024a. "Quick Stats Tools." Available at <u>nass.usda.gov/Quick Stats</u>.
- U.S. Department of Agriculture, National Agricultural Statistics Service (NASS). 2024b. "Crop Production Annual Summary." Available at <u>usda.library.cornell.edu/concern/</u> <u>publications/k3569432s?locale=en</u>.



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