



2023 Tennessee Ag and Forest Stats

Economic Contributions of Agriculture and Forestry in Tennessee

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June 2025



2023 Executive Summary

Tennessee’s agri-forestry industrial complex includes the primary industries typically associated with agriculture and forest operations such as growing crops, breeding and feeding of livestock, along with management and logging of trees. The industrial complex also includes both input supplying industries and value-added subsectors comprised of food and beverage manufacturing, apparel and textiles, and forestry products manufacturing (see Figure 1).

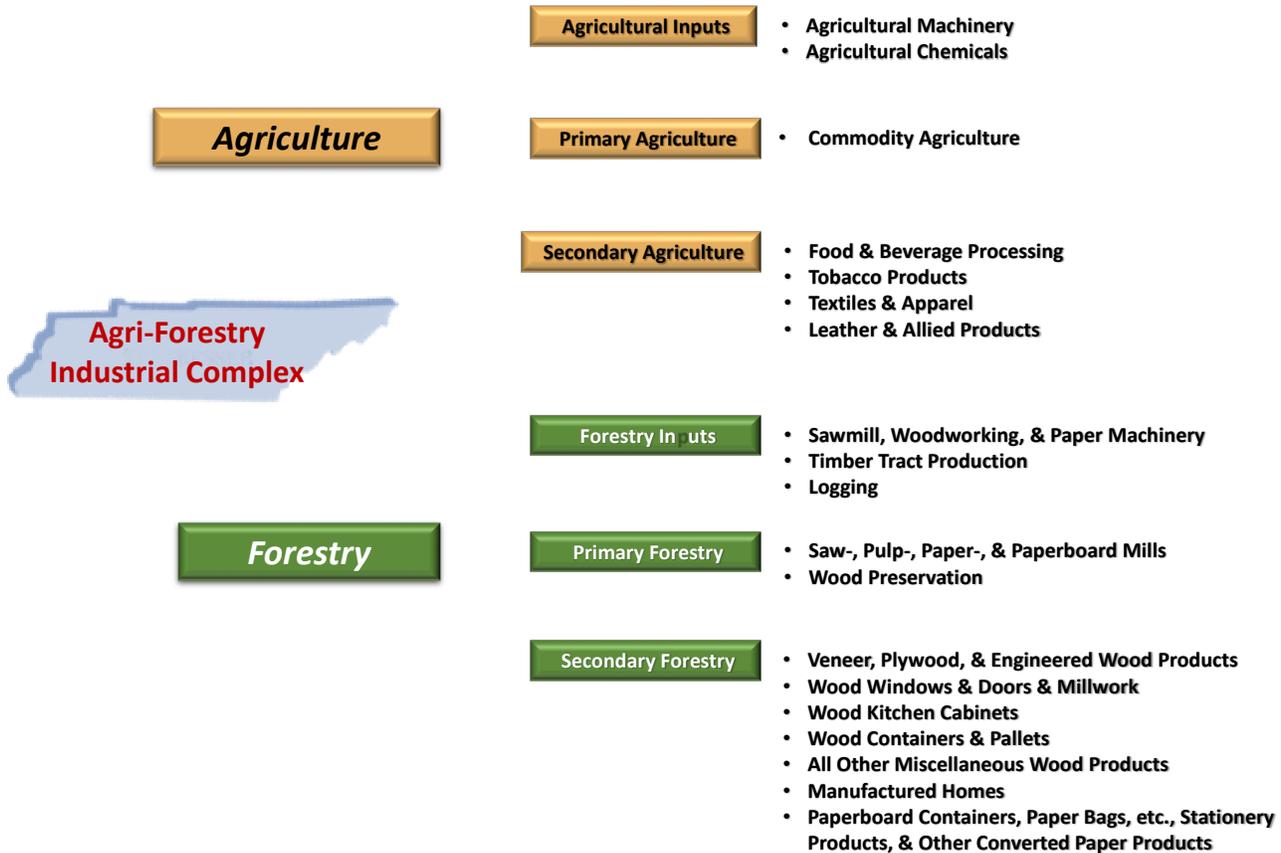


Figure 1. Graphic of Tennessee Agri-Forestry Industrial Complex used in this Analysis

In 2023, the agri-forestry industrial complex directly and indirectly (i.e., including multiplier effects) contributed **\$103.8 billion** to Tennessee’s economy. In terms of gross output this value was 10.6 percent of the economic activity conducted in the state. An estimated 390,583 individuals work in industries either part of or supported by the complex, or 8.5 percent of total employment in Tennessee. **Agriculture** generated **\$74.8 billion** in output or 7.6 percent of the economic activity in Tennessee and supported 299,180 jobs, with 92,540 (both full- and part-time) jobs in agricultural production. **Forestry** included the management and logging of trees; sawmills (primary forestry products), including pulp and paper mills, plus forestry products manufacturing (secondary forestry products). Forestry accounted for 3.0 percent of the state’s economy, supported 91,402 Tennessee jobs and generated **\$29.1 billion** in output.

The 2023 output and employment multipliers for agricultural commodities and forestry activities (i.e., logging, sawmills, and pulp-, paper- and paperboard-mills) ranged from 1.022 to 1.814 for total industrial output (economic activity) and 1.004 to 4.150 for employment. Sawmills output multiplier of 1.814 indicates that for every dollar invested in sawmills an additional \$0.814 of economic activity is generated. The employment multiplier of 3.190 indicates that for every job supported in the sawmills industry an estimated 2.190 additional jobs are supported in other industries.

For purposes of comparison, in 2023, Tennessee’s economy totaled \$980.1 billion in output and had close to 4.6 million jobs. Industry sectors with larger magnitudes of *direct* economic activity other than the agri-forestry industrial complex were services (\$330.2 billion), manufacturing (\$168.1 billion), real estate (\$83.0 billion), government (\$66.2 billion) and then agri-forestry (\$65.9 billion) (Figure 2).

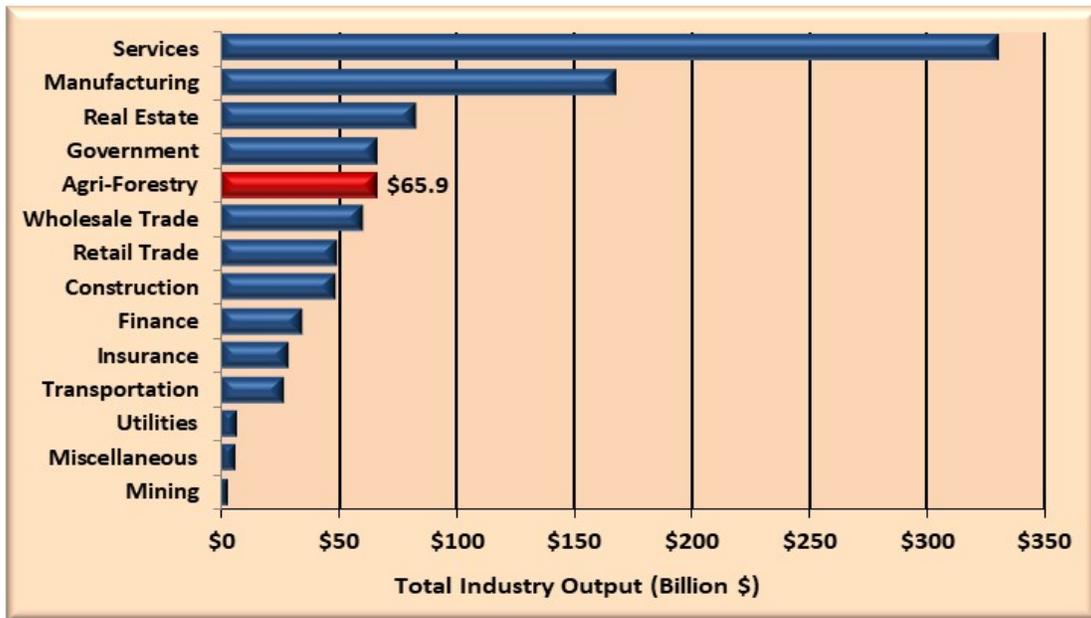


Figure 2. Direct Total Industry Output by Sector, Tennessee Total Economy, 2023
 (Source: IMPLAN Group, LLC, 2023 Data)

Industry sectors with larger magnitudes for *direct* employment than the agri-forestry industrial complex were services (2,134.7 thousand), followed by government (492.3 thousand), retail trade (397.8 thousand), construction (286.0 thousand), manufacturing (270.5 thousand), real estate (201.3 thousand) and then agri-forestry (188.6 thousand) (Figure 3).

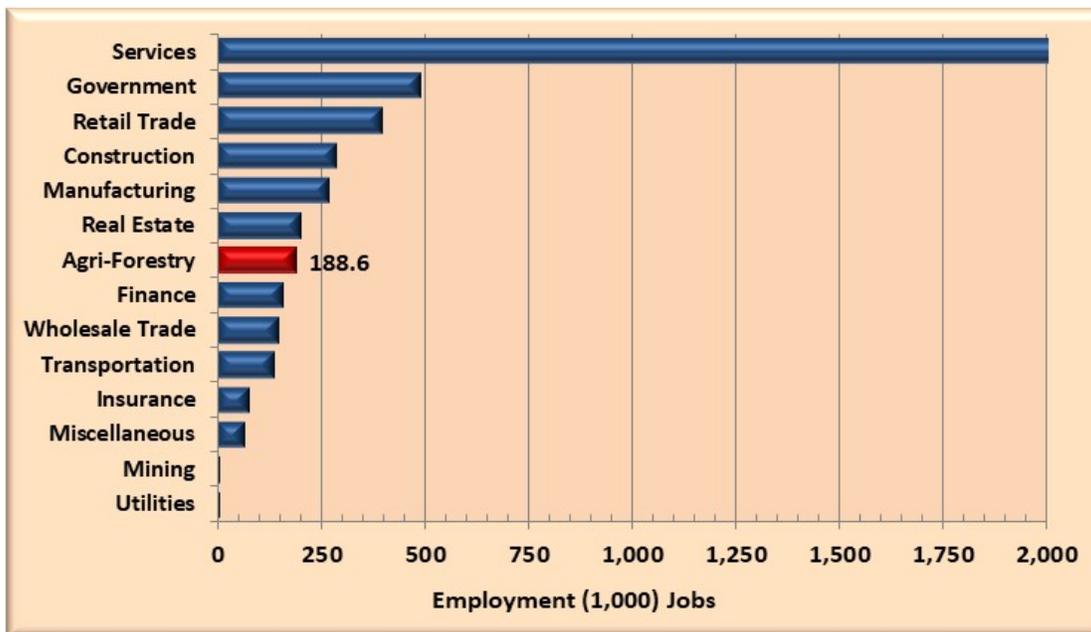


Figure 3. Direct Employment by Sector, Tennessee Total Economy, 2023
 (Source: IMPLAN Group, LLC, 2023 Data)

For direct value-added (or contribution to gross state product), the agri-forestry industrial complex ranked eighth at \$21.4 billion behind construction (\$24.8 billion), wholesale trade (\$34.5 billion), retail trade (\$37.1 billion), manufacturing (\$48.1 billion), government (\$50.1 billion), real estate (\$59.2 billion) and services (\$202.4 billion) (Figure 4).



Figure 4. Direct Total Value Added by Sector, Tennessee Total Economy, 2023

(Source: IMPLAN Group, LLC, 2023 Data)

Compared to the 2023 Tennessee agri-forestry economic contributions report using 2021 IMPLAN data, the state’s overall economy for 2023 grew by a nominal value of \$160.0 billion with the direct agri-forestry industrial complex (without multiplier effects) increasing by \$7.9 billion. Comparing recent direct growth for total industry output (economic activity) in agriculture and forestry as a percentage of Tennessee’s total economy indicates relatively low growth for the years depicted in Figure 5. The average nominal growth from 2006 through 2023 for **direct** agriculture and forestry were 7.0 percent and 2.7 percent, respectively. For agriculture, the annual periods from 2006-2009, 2011-2013, 2019-2021 and 2021-2023 had the largest gains; for forestry, 2011-2013, 2013-2015, 2019-2021 and 2021-2023. Figure 6 compares the **total (with multiplier effects)** output for agriculture and forestry to Tennessee’s total economy. The average nominal growth from 2006 through 2023 for **total** agriculture and forestry were 5.1 percent and 1.7 percent, respectively. For both agriculture and forestry, the annual periods 2011-2013, 2013-2015, 2019-2021 and 2021-2023 had the largest gains.

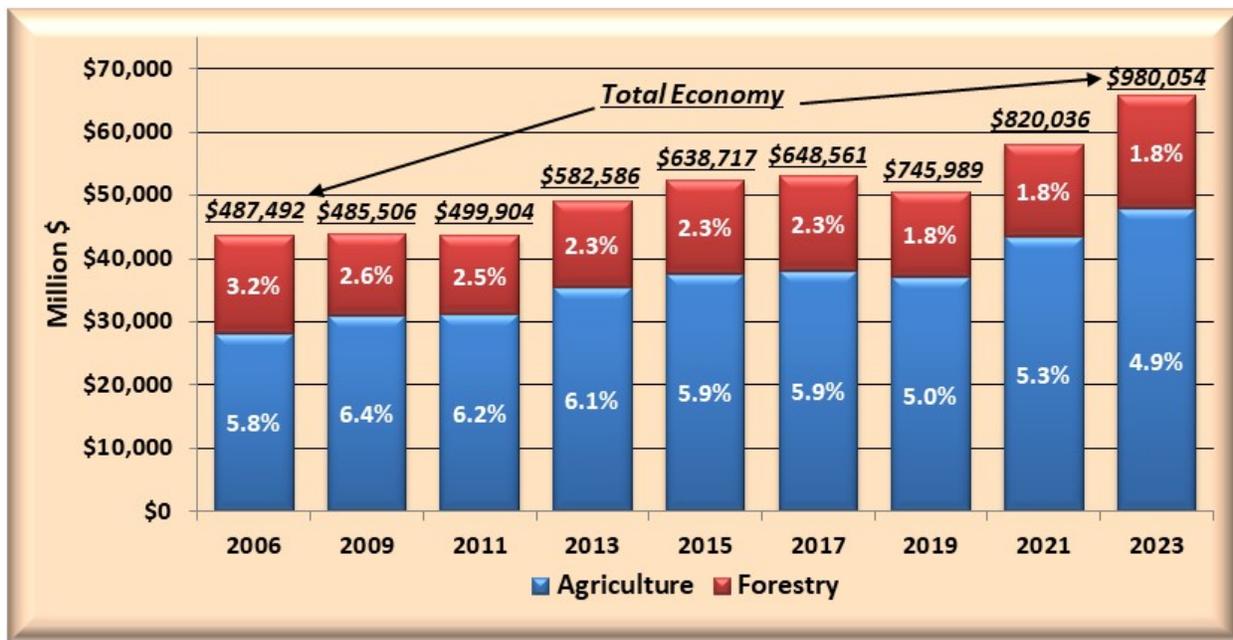


Figure 5. Nominal Change in Direct Output for Agriculture and Forestry as a Percentage of Tennessee's Total Economy
(Source: IMPLAN Group, LLC, 2006-2023 Data)

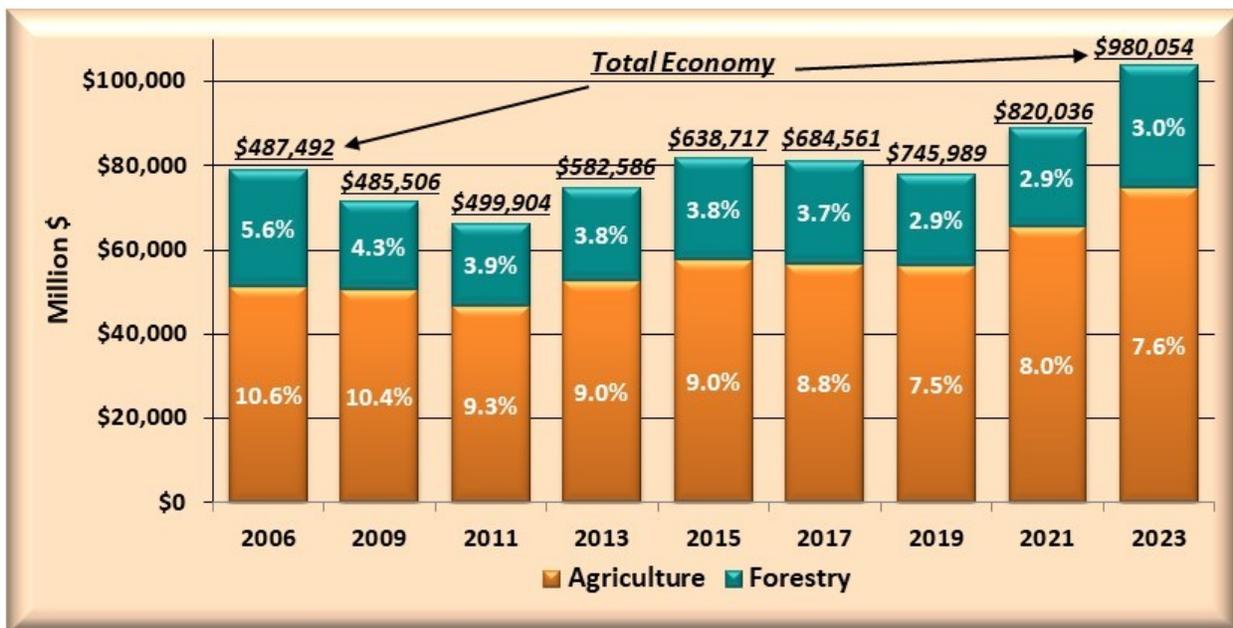


Figure 6. Nominal Change in Total Output (with Multiplier Effects) for Agriculture and Forestry as a Percentage of Tennessee's Total Economy
(Source: IMPLAN Group, LLC, 2006-2023 Data)

When comparing a county's *direct* (without multiplier effects) agriculture and forestry economic activity to its total economic activity (all industries) for each of Tennessee's 95 counties, Lake County had the highest share of economic activity for commodity agriculture (*includes crop and livestock breeding and feeding*) at 14.3 percent. For all agriculture (*includes direct agriculture, plus agricultural input supplying and agriculture-based manufacturing sectors*), Moore County had the highest share of economic activity at 51.1 percent). For direct forestry (*i.e., the management and logging of forests*), Wayne County had the highest level

of direct economic activity at 1.7 percent. For all forestry (*includes direct forestry, plus input supplying industries and forestry manufacturing*), Hardin County had the highest share at 22.0 percent. Combining both agriculture and forestry economic activity, Moore and Weakley Counties had the largest shares of local economic activity at 51.2 percent and 31.3 percent, respectively (see Table 24, page 33).

Other study highlights:

- Compared to the 2021 Tennessee agri-forestry economic contributions report, the state’s overall economy grew by a nominal value of \$160.0 billion (19.5 percent) and the agri-forestry industrial complex increased by \$7.9 billion (13.6 percent) (Figure 5).
- In 2023, agriculture input supplying industries – agricultural machinery (e.g., farm machinery and equipment plus lawn and garden equipment) and chemical products (e.g., fertilizers, pesticides and lime) – generated \$2.4 billion in economic activity.
- In 2023, Tennessee farmers earned the majority of their cash receipts from soybeans, beef cattle and calves, broilers, corn, miscellaneous crops, cotton, hay, wheat, hogs and dairy products.
- Tennessee’s average annual sawtimber removals on timberland were estimated at close to 1.5 billion board feet with the majority of the removals (81.5 percent) from private landowners. The predominant species removed from private owned lands were yellow poplar, white and red oaks, loblolly and shortleaf pines and hickory.
- In 2023, the total value of Tennessee’s forest products international exports was \$149.5 million. The top five forest products exported were sawn oak and ash, wooden casks and barrels, non-coniferous sawn lumber not elsewhere specified and rough, non-coniferous wood not elsewhere specified.
- The top five export markets for Tennessee’s forest products were China, United Kingdom, Canada, Ireland and Mexico.
- Secondary agriculture and forestry manufacturing value of shipments contributed a total of \$46.7 billion to the state’s economy employing over 82,000 Tennesseans with a payroll of \$4.4 billion. Approximately 82.2 percent of the value of shipments came from food manufacturing, beverage and tobacco products manufacturing and paper manufacturing.
- In 2023, bulk commodities, intermediate products and consumer-oriented products international exports for agricultural products totaled \$2.6 billion. Of that value, 59.0 percent were consumer-oriented products, 35.0 percent were bulk commodities and 6.0 percent were intermediate products.
- The top five agriculture commodities exported internationally were cotton, tobacco, wheat, soybeans and rice. The top five export trading partners were China, Vietnam, Pakistan, Hong Kong and Bangladesh.
- According to the most recent Census of Agriculture, from 2017 to 2022 the top three southern states with the highest increases in production expenses were Louisiana (44.4 percent increase), Alabama (39.5 percent) and North Carolina (38.5 percent). The lowest were Oklahoma (15.4 percent increase), Texas (21.7 percent) and Virginia (21.6 percent). Tennessee was ranked eighth (31.6 percent increase). The top five production expenses purchased were feeds; livestock and poultry purchased or leased; hired farm labor; fertilizer, lime, and soil conditioners; and repairs, supplies, and maintenance costs.

The findings presented in the “Tennessee Agricultural Economic Impact Results” were estimated using IMPLAN’s most recent 2023 data set. IMPLAN (IMpact Analysis for PLANing), an input-output model, traces backward linked transactions conducted in the economy and attempts to quantify the economic interdependencies for a given point in time. Through these interdependencies, one can evaluate the indirect and induced economic contributions that economic activity has on the entire state economy. IMPLAN’s Cloud platform offers an industry contribution analyses option, which was used to generate the estimated economic impacts for this analysis (see more detailed definitions and methodology discussion in the “Input-Output Analysis: Data and Methods Used” section).

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2023 Economic Contributions of Agriculture and Forestry in Tennessee

Introduction

This study provides measures of the economic contributions and importance of the agricultural and forestry industrial complex on Tennessee’s economy in 2023.¹ An input-output model reflecting the state’s 2023 economy is used to determine direct economic contributions on related input industries and economic contributions through resulting expenditures by households at the state level. Economic contributions are provided for four major metrics: total industry output (a measure of economic activity), employment, labor income, and value-added (gross regional product or GRP). For the purpose of this analysis, agriculture² and forestry includes the production and processing of agricultural and forest products and the input suppliers of these products.

The structure of this document corresponds with the objectives of this analysis, which are to:

1. Provide an overview of Tennessee’s agriculture and forestry resources including crop and livestock cash receipts, Tennessee’s rank in the United States based on the production of agricultural products, exports for both agricultural and forestry products, plus agricultural and forestry manufacturing statistics (*pages 1-12*).
2. Compare state level changes in livestock and crop statistics for 2021 and 2023 including changes in livestock inventory, crop acreages, and prices (*page 13-14*).
3. Assess the economic contributions and importance of the agricultural and forestry industrial complex for the state with an input-output model (*pages 15-35*).
4. Analyze agriculture and forestry’s tax contributions to the state (*page 36*).

Overview of Agriculture and Forestry in Tennessee

Agricultural Overview

In 2023, 63,100 Tennessee farms³ used 10.7 million acres (Figure 7),⁴ or 39.7 percent of the state’s land base. For the ten-year period from 2013 to 2023, the number of farms in the state decreased an average of 0.8 percent annually. For that same timeframe, land in farms also decreased an average of 0.2 percent

¹This study continues the series of previous reports where the economic contributions and importance of the agricultural and forestry industrial complex on Tennessee’s economy were examined using 1997, 2000, 2003, 2006, 2009, 2011, 2013, 2015, 2017, 2019, and 2021 IMPLAN data, respectively (previous report, Menard et al., 2023). For additional details on the previous studies and the IMPLAN version used, see *Appendix A*.

²In this report, forestry and the production of forest products were incorporated into agriculture and agribusiness, respectively.

³Defined as an establishment with \$1,000 or more of agricultural products sold or would normally be sold during the year (USDA/ERS, 2022).

⁴Raster image is based on USDA/NASS’s cropland data layer—a raster, geo-referenced, crop-specific land cover data layer with a ground resolution is 30 square meters (USDA/NASS, 2025b). Map includes all row, specialty, and truck crops, plus fruit production.

annually, while the average farm size increased an average of 0.8 percent annually. In 2023, Tennessee’s average farm size was 170 acres compared to 464 acres for the United States. Other Southeastern states with similar average farm sizes as Tennessee include Kentucky at 179 acres, followed by Virginia at 187 acres and North Carolina at 191. Arkansas, Mississippi, and Louisiana have average farm sizes of 366, 331 and 323 acres, respectively. Approximately 61.3 percent of all Tennessee farms had sales in the \$1,000-\$9,999 range, 31.5 percent in the \$10,000-\$99,999 range, and 7.1 percent had sales of \$100,000 or more (USDA/NASS, 2024c).

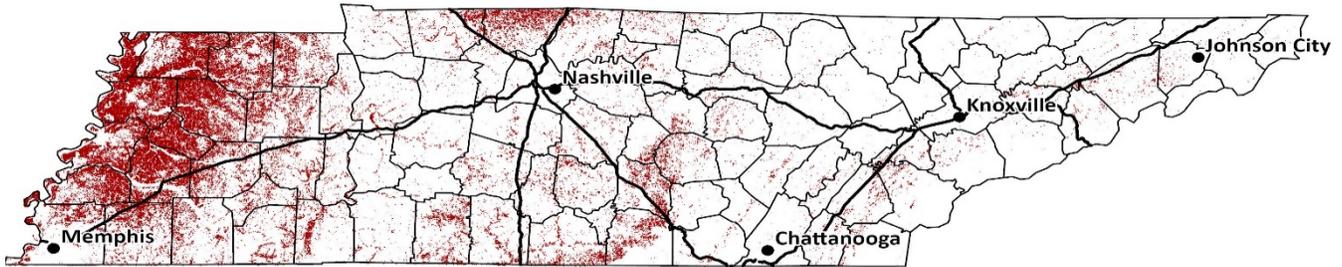


Figure 7. Location of Cropland in Tennessee, 2023

(Source: USDA/NASS, 2025)

Cash receipts for all commodities in Tennessee totaled close to \$5.2 billion in 2023.⁵ Of that total, \$3.1 billion (59.8 percent) was from crops and \$2.1 billion (40.2 percent) was from all livestock and livestock products. Based on harvested acreage, Tennessee was ranked in the upper half of the nation for most major crops (Table 1). Approximately 35.3 percent of Tennessee’s total harvested cropland acreage (roughly 4.8 million acres) was in hay (all types), followed by soybeans (32.3 percent), corn for grain (18.3 percent), cotton (8.0 percent) and wheat (5.3 percent). For available crop data, soybeans had the largest cash receipts,

Table 1. Crops Harvested, Acreage, Tennessee Ranking, and Cash Receipts, 2023					
Crops	Harvested Acreage	Tennessee Ranking	Leading State	Cash Receipts^a	% of State Crop Total^b
	(Thousand Acres)			(Thousand \$)	
Hay (all types)	1,716	10 ^c	Texas	\$236,935	7.6
Soybeans	1,570	17	Illinois	\$991,266	31.7
Corn for grain	890	17	Iowa	\$645,365	20.6
Winter wheat	390	17	Kansas	\$192,877	9.6
Cotton, lint	260	8	Texas	\$299,477	6.2
Corn for silage	30	32	Wisconsin	--	--
All tobacco	8.95	4	N. Carolina	\$76,967	2.5

^{a,b}For 2023, cash receipts for all commodities grown in Tennessee were \$5.2 billion (\$3.1 billion for crops).

^cFor 2023, Tennessee was also ranked 31st for alfalfa hay.

Source: USDA/ERS, 2024; USDA/NASS, 2025a, 2025c

⁵Cash receipt sales may not reflect the total values of commodities produced and used. For instance, a vertically integrated agribusiness may use hay or corn it produced to feed its own livestock.

followed by corn for grain, cotton, hay, wheat and tobacco. Tennessee’s top crop counties based on harvested acreage were Gibson County for both corn and wheat, Haywood County for cotton, and Dyer County for soybeans (USDA/ERS, 2024; USDA/NASS, 2025a, 2025c).

Based on the number of head, broilers, chickens (excluding broilers), cattle and calves, hogs, equine and milk cows were the predominant livestock in the state (Table 2). According to the USDA’s ERS for 2023, cash receipts from farm marketing for these livestock products totaled close to \$2.1 billion. Of that total, cattle and calves contributed 41.8 percent, broilers 37.9 percent, hogs 6.6 percent, dairy 4.8 percent and all other chickens 3.3 percent. Tennessee is ranked 12th in the United States for the number of beef cows on farms, 15th for broilers, 16th for cattle and calves, 18th for hogs, 24th for all other chickens and 33rd for milk cows. Tennessee’s top cattle counties based on number of head are Greene for beef cattle and McMinn for dairy cattle (USDA/ERS, 2024; USDA/NASS, 2024a, 2024b, 2024d, 2024f, 2024g, 2024h, and 2025c).

Table 2. Livestock Numbers, Tennessee Ranking, and Cash Receipts, 2023

Livestock	Inventory (Number)	Tennessee Ranking	Leading State	Production ^a	Cash Receipts ^b (Thousand \$)	% of State Livestock Total ^c
Broilers ^d	185,700,000	15	Georgia	1,114,200	\$794,425	37.9
All other chickens ^e	4,223,000	24	Iowa		\$70,075 ^j	3.3
Cattle & calves ^f	1,680,000	16	Texas	579,719	\$876,691 ^k	41.8
Beef cows ^f	854,000	12	Texas		--	--
Hogs ^g	320,000	18	Iowa	228,964	\$137,778 ^k	6.6
Equine ^h	85,533	11 ⁱ	Texas	--	--	--
Milk cows ^f	25,000	33	California	467.0	\$100,498 ^l	4.8

^aThousand pounds for broilers, cattle and calves, and hogs; million pounds of milk for milk cows

^{b,c}For 2023, cash receipts for all commodities were \$5.2 billion (\$2.1 billion for livestock & products)

^dPeriod December 1 previous year through November 30, 2023

^eDecember 1, 2022-2023; includes layers, pullets, and other; excludes commercial broilers

^fAs of January 1, 2023

^gAs of December 1, 2023

^hIncludes horses, ponies, mules, burros, and donkeys

ⁱBased on the 2022 Census of Agriculture, Tennessee was ranked 11th for horses and ponies and 3rd for mules, burros, and donkeys

^jIncludes eggs and farm chickens; excludes commercial broilers and turkeys

^kReceipts from marketing and sale of farm slaughter

^lMilk cash receipts from marketings

Source: USDA/ERS, 2024; USDA/NASS, 2024a, 2024b, 2025c, 2024d, 2024f, 2024g, 2024h, 2024i)

Based on IMPLAN model estimates, Tennessee’s more significant agricultural commodities in terms of dollar value, along with their corresponding U.S. market share, are shown in Table 3. In descending order, they were oilseed farming (primarily soybeans); grain farming (barley, corn, oats, sorghum and wheat); poultry and egg production; beef cattle farming; greenhouse, nursery and floriculture production; cotton farming; animal production, except cattle, poultry and eggs; vegetables and melon farming; all other crop farming (primarily hay and seed); dairy cattle and milk production; tobacco farming; fruit farming; and tree nut farming. Tobacco

Table 3. State Value of Agricultural Commodities and U.S. Market Share, 2023

Agricultural Industry	Total Industry Output ^{a,b}	Market Share of U.S. Production
	(Million \$)	(Percent)
Oilseed farming	\$1,017.9	1.9%
Grain farming	\$953.7	1.0%
Poultry & egg production	\$937.4	1.4%
Beef cattle farming	\$888.3	0.9%
Greenhouse, nursery, & floriculture production	\$423.9	2.0%
Cotton farming	\$272.3	4.7%
Animal production, except cattle/poultry/eggs ^c	\$206.1	0.6%
Vegetable & melon farming	\$172.4	0.6%
All other crop farming ^d	\$165.7	0.8%
Dairy cattle & milk production	\$101.8	0.2%
Tobacco farming	\$66.6	6.4%
Fruit farming	\$20.8	0.1%
Tree nut farming	\$1.8	0.02%

^aTotal Industry Output – annual value of production by industry (a measure of economic activity)

^bA value of production measure that includes on-farm consumption, and it is net of inventory changes.

^cPrimarily hogs, sheep & goats, aquaculture, equine, and apiculture

^dPrimarily hay/seed farming

Source: IMPLAN Group, LLC, 2023 Data

farming; cotton farming; greenhouse, nursery and floriculture production; oilseeds farming; and poultry and egg production had the largest market share of U.S. production at 6.4 percent, 4.7 percent, 2.0 percent, 1.9 percent and 1.4 percent, respectively.

From 2013 through 2023, the number of Tennessee milk cows decreased an average of 6.3 percent per year. While production per cow increased an average of 1.6 percent per year for that same timeframe, total milk production for the state decreased an average of 4.7 percent annually. Compared to the 2021 report, total milk production in the state in 2023 declined by 8.1 percent from 508.0 million pounds to 467.0 million pounds, the number of head declined 10.7 percent from 28,000 head to 25,000, and production per cow increased 3.0 percent from 18,143 pounds per cow to 18,680 pounds. From 2018 to 2023, Tennessee cash receipts from dairy have ranked 33rd compared to other U.S. states. The highest national rank, 30, was for the years 2014 and 2015, and the lowest, 34, was for 2008. Compared to other Tennessee agriculture commodities, dairy cash receipts have ranged from sixth (2015) to tenth (2008, and 2021 to 2023) in rank. For 2023, dairy cash receipts (\$100.5 million) were less than those earned for soybeans (\$991.3 million), cattle and calves (\$876.7 million), broilers (\$794.4 million), corn (\$645.4 million), miscellaneous crops (\$532.7 million), cotton (\$532.7 million), hay (\$236.9 million), wheat (\$192.9 million) and hogs (\$137.8 million). Most of the dairy industry in Tennessee is comprised of small farms. Approximately 89.6 percent of the dairy farms in the state have less than 100 head. For the remaining 10.4 percent of the farms with greater than 100 head, 57.7 percent had dairy herd sizes of 100-199 head, 29.6 percent for 200-499 head, 8.5 percent for 500-999 head

and 4.2 percent for 1,000-2,499 head. No farms in the state had a dairy herd equal to or greater than 2,500 head (USDA/ERS, 2024; USDA/NASS, 2024e, 2024i).

Tennessee’s 2023 agricultural commodity (foreign) exports based on bulk, intermediate and consumer oriented (BICO) designation totaled \$2.6 billion (Table 4). Of that value, 59.0 percent were consumer oriented products, 35.0 percent were bulk commodities and 6.0 percent were intermediate products. The top five commodities exported in bulk (large volume, minimally processed) were cotton, tobacco, wheat, soybeans and rice. The top five export trading partners were China, Vietnam, Pakistan, Hong Kong and Bangladesh. Intermediate products (some processing but not fully consumer ready) exported were dextrans; peptones and proteins; sugar and sweeteners; vegetable oils; other feeds and fodders; and live animals. The top markets for these products were Canada, Mexico, China, Netherlands and Guatemala. For consumer oriented products (direct consumer consumption), the top export markets were Netherlands, Canada, Mexico, United Kingdom and the United Arab Emirates with the top commodities exported consisting of distilled spirits; bakery goods, cereals and pastas; poultry meat and products (excluding eggs); soup and other food preparations; and chocolate and cocoa products (USDA/FAS, 2025).

Table 4. Value of Bulk, Intermediate, and Consumer-Oriented (BICO) Exports to the World for Tennessee’s Agricultural Products, 2023

BICO Group	Value (\$1,000)	Top 5 Commodities	Top 5 Country Export Markets
Bulk ¹ Commodities	\$915,658	Cotton, Tobacco, Wheat, Soybeans, and Rice	China, Vietnam, Pakistan, Hong Kong, and Bangladesh
Intermediate ² Products	\$157,815	Dextrins, peptones, & proteins; sugar & sweeteners ; vegetable oils NESOI ⁴ ; other feeds & fodders; and live animals	Canada, Mexico, China, Netherlands, and Guatemala
Consumer ³ Oriented Products	\$1,546,382	Distilled spirits; bakery goods, cereals, & pasta; poultry meat & products (excluding eggs); soup & other food preparations; and chocolate & cocoa products	Netherlands, Canada, Mexico, United Kingdom, and United Arab Emirates
Total	\$2,619,855		

¹Large volume (traded in bulk); minimally processed

²Undergone some processing but not yet fully consumer ready

³Directed toward direct consumer consumption rather than being used as intermediate inputs

⁴Not elsewhere specified or included

Source: USDA/FAS, 2025(GATS)

Forest Overview

Roughly 52.8 percent of Tennessee is covered in forest (Figure 8).⁶ The forest cover is primarily hardwoods (89 percent of the forest composition) making the state one of the top three hardwood lumber producing states in the U.S. There are more than 120 tree species in Tennessee. White oak, red oak, hickory, yellow poplar and maple are among the more predominant hardwood species. For softwoods, loblolly pine, Virginia pine, red cedar and shortleaf pine are major species. The dominant forest type in the state is oak and hickory, accounting for an estimated 9.9 million acres (Tennessee Forestry Association, 2017). Other forest types include bottomland hardwoods along the Mississippi River floodplains, mixed pine and hardwoods growing in dry, rocky soils in the eastern part of the state, mixed mesophytic (moderately moist) on lower mountain slopes and valleys and redcedar growing in limestone cedar glades in the middle of the state (Tennessee Wildlife Federation, 2024). Of the 13.8 million acres in forest, 83.0 percent are privately owned with federal (10.0 percent) and state/local forests (7.0 percent) comprising the rest. The state has an estimated 8.4 billion live trees with a volume of 47.6 billion cubic feet (USDA/FS, 2025).



Figure 8. Location of Forest Land in Tennessee, 2023

(Source: USDA/NASS, 2025)

For 2021, average annual sawtimber⁷ removals on timberland⁸ were estimated at close to 1.5 billion board feet (Table 5). Of that value, most of the removals, 81.5 percent, were from private landowners (1.2 billion board feet), followed by other non-federal public (177.0 million board feet), state and local (64.6 million board feet) and federal (30.7 million board feet). The predominant species removed on federal lands were cypress, eastern white pines and ash. For state and local, yellow poplar, white and red oaks, hickory and loblolly/shortleaf pines. White and red oaks and yellow poplar were primarily removed from other non-federal

⁶Raster image is based on USDA/NASS's cropland data layer—a raster, geo-referenced, crop-specific land cover data layer with a ground resolution is 30 square meters. Map includes all forest types (deciduous, evergreen, mixed, and woody wetlands).

⁷"A live tree of commercial species containing at least a 12-foot sawlog or two noncontiguous sawlogs 8 feet or longer and meeting regional specifications for freedom from defect. Softwoods must be at least 9.0 inches in diameter at breast height (d.b.h.); hardwoods must be at least 11.0 inches d.b.h." (USDA Forest Service, 2024b, p.22).

⁸"Unreserved forest land capable of producing 20 cubic feet per acre per year of wood from trees classified as timber species and designated as a timber forest type" (USDA Forest Service, 2024b, p. 26).

lands. For private owned lands, the predominant species removed were yellow poplar, white and red oaks, loblolly/shortleaf pines and hickory (USDA/FS, 2024a).

Table 5. Average Annual Removals of Sawtimber Trees by Species Group and Owner Class, 2021

Tree Species Group	Federal	State & Local	Private	Other ^a	Total ^b
	<i>Board Feet (International 1/4-inch rule)</i>				
Loblolly & shortleaf pine		3,937,619 ^e	122,767,017 ^c	7,854,912 ^d	134,559,548 ^c
Other yellow pine	164,702 ^e		8,249,164 ^e	16,243,547 ^e	24,657,413 ^d
Eastern white & red pine	3,297,333 ^e	143,053 ^e	19,071,244 ^e	180,878 ^e	22,692,509 ^e
Eastern hemlock			1,040,658 ^e		1,040,658 ^e
Cypress	21,607,461 ^e				21,607,461 ^e
Other eastern softwoods			3,157,391 ^d	2,497,590 ^e	5,654,981 ^d
Select white oaks	277,455 ^e	6,714,232 ^e	190,307,099 ^c	21,824,156 ^d	219,122,943 ^c
Select red oaks		9,608,988 ^e	54,640,742 ^d	3,479,846 ^e	67,729,576 ^d
Other white oaks	639,296 ^e	10,867,487 ^e	130,950,348 ^c	20,568,064 ^d	163,025,195 ^c
Other red oaks	1,247,821 ^e	2,423,139 ^e	159,420,664 ^c	23,723,367 ^d	186,814,992 ^c
Hickory		3,880,021 ^e	89,776,551 ^c	8,547,340 ^d	102,203,912 ^c
Hard maple		306,189 ^e	32,982,261 ^d	2,443,174 ^e	35,731,624 ^d
Soft maple	1,364,047 ^e		11,920,848 ^d	3,617,656 ^d	16,902,552 ^d
Beech			11,780,793 ^e	3,189,227 ^e	14,970,019 ^d
Sweetgum		3,079,072 ^e	35,658,598 ^d	9,321,460 ^e	48,059,130 ^d
Tupelo & blackgum			6,985,341 ^d	2,214,948 ^e	9,200,289 ^d
Ash	2,130,089 ^e	1,211,044 ^e	14,344,513 ^d	2,380,608 ^e	20,066,254 ^d
Basswood			1,899,896 ^e	919,093 ^e	2,818,989 ^c
Yellow-poplar		21,463,233 ^e	256,872,178 ^c	17,773,985 ^d	296,109,396 ^d
Black walnut			12,326,295 ^d	942,470 ^e	13,268,764 ^c
Other eastern soft hardwoods		939,193 ^e	34,023,245 ^d	28,168,405 ^d	63,130,844 ^d
Other eastern hard hardwoods			1,530,358 ^e	1,130,984 ^e	2,661,342 ^d
Total	30,728,204^e	64,573,270^e	1,199,705,205^c	177,021,710^c	1,472,028,391^c

^aOther non-federal public

^bTotals may not add due to rounding

^cPercent sampling error ≤ 25 percent

^dPercent sampling error > 25 percent and ≤ to 50 percent

^ePercent sampling error > 50 percent

Source: USDA Forest Service, 2024 Evaluator

Tennessee's 2023 top twenty forest products export values ranked in descending order are listed in Table 6. The total value of Tennessee's forest products international exports was \$149.5 million. The top five forest products exported were sawn oak and ash, wooden casks and barrels, non-coniferous sawn lumber not elsewhere specified and rough, non-coniferous wood not elsewhere specified. The top five export markets for Tennessee's forest products were China, United Kingdom, Canada, Ireland and Mexico (USDA/FAS, 2025).

Table 6. Top 20 Value of Tennessee Forest Products Exports to the World, 2023\$

BICO- HS6 ^a	Forest Products	2019	2020	2021	2022	2023
				\$1,000		
440791	Sawn Wood > 6mm, Oak	83,683	64,999	87,720	80,904	45,764
441600	Wooden Casks & Barrels	20,449	16,920	13,496	23,111	45,242
440799	Sawn Wood > 6mm, Noncon ^b Nesoic ^c	10,203	7,310	12,105	14,183	11,908
440795	Sawn Wood > 6mm, Ash	12,318	11,436	14,978	12,972	10,104
440399	Wood, Rough, Noncon ^b Nesoic ^c	6,329	4,121	9,338	9,573	7,279
440391	Wood, Rough, Oak	8,825	5,570	9,178	8,347	5,849
440797	Sawn Wood > 6mm, Poplar & Aspen	7,661	9,136	10,311	8,204	5,590
441899	Wood	4,525	4,928	10,364	4,424	2,561
441520	Wooden Pallets	1,503	571	1,239	5,881	2,161
441012	Wood Oriented Strand Board (OSB)	6,838	3,902	1,624	5,285	1,613
440793	Sawn Wood > 6mm, Maple	692	642	1,709	1,566	1,222
440711	Sawn Wood > 6mm, Pine	183	668	2,466	4,255	1,215
440131	Wood Pellets	194	83	58	134	946
440929	Shaped Wood, Noncon ^b Nesoic ^c	2,862	1,067	1,012	1,121	813
441510	Wooden Cases & Boxes	149	281	262	568	646
441829	Wooden Doors & Frames, Nesoic ^c	0	0	0	288	583
441193	Fiberboard > 0.5 & ≤ 0.8 g/cm ³	588	419	61	366	574
440794	Sawn Wood > 6mm, Cherry	591	625	2,237	983	538
442199	Wooden Articles Nesoic ^c	190	252	826	186	529
440719	Sawn Wood > 6mm, Coniferous Nesoic ^c	608	1,590	638	278	448
	Total	168,391	134,520	179,622	182,629	145,585
	World Total	176,899	139,048	185,551	195,369	149,517

^aBICO-HS6-six digit harmonized system report of bulk, intermediate, and consumer-oriented agricultural products

^bNonconiferous

^cNesoic-Not elsewhere specified or included

Source: USDA/FAS, 2025

Agriculture and Forestry Manufacturing Overview

Agriculture and forestry manufacturing industries by county for the state (Figures 9 through 18) included food (*NAICS code 311*), animal slaughtering and processing (*NAICS code 3116*), beverage and tobacco products (*NAICS code 312*), textile mills (*NAICS code 313*), textile product mills (*NAICS code 314*), apparel (*NAICS code 315*), leather and allied products (*NAICS code 316*), wood products (*NAICS code 321*), paper (*NAICS code 322*) and furniture and related products (*NAICS code 337*). For these industries in 2022, \$46.7 billion dollars of goods were shipped, and more than 82,000 Tennesseans were employed with a payroll of \$4.4 billion (Table 7). Food manufacturing shipped the largest value of goods at \$24.9 billion, followed by beverage and tobacco products manufacturing at \$6.8 billion and paper manufacturing at \$6.7 billion. As a group, textile mills, including textile product mills and apparel, shipped close to \$1.8 billion. For the forest products group, which included wood products manufacturing, paper manufacturing and furniture and related products, \$13.2 billion of goods were shipped. Tennessee's national market share for value of shipments for food manufacturing was 2.4 percent, beverage and tobacco products at 3.9 percent, textile mills at 4.4 percent,

textile product mills at 1.7 percent, apparel manufacturing at 2.5 percent, wood product manufacturing at 2.4 percent, paper manufacturing at 3.1 percent and furniture and related products at 2.5 percent. Of the value-added agri-forestry sectors, food manufacturing employed the largest share at 35,236. The forest products group (wood products, paper and furniture and related products) employed 33,169. The textile mills and related products, including apparel, employed 7,583 workers (U.S. Census Bureau, 2025).

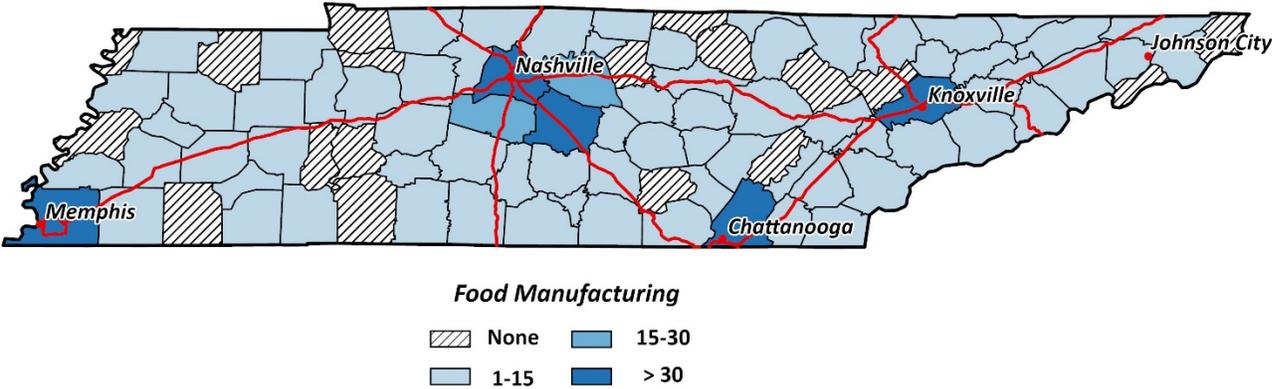


Figure 9. Number of Food Manufacturing Establishments in Tennessee, 2023
 (Source: U.S. Department of Labor, 2024)

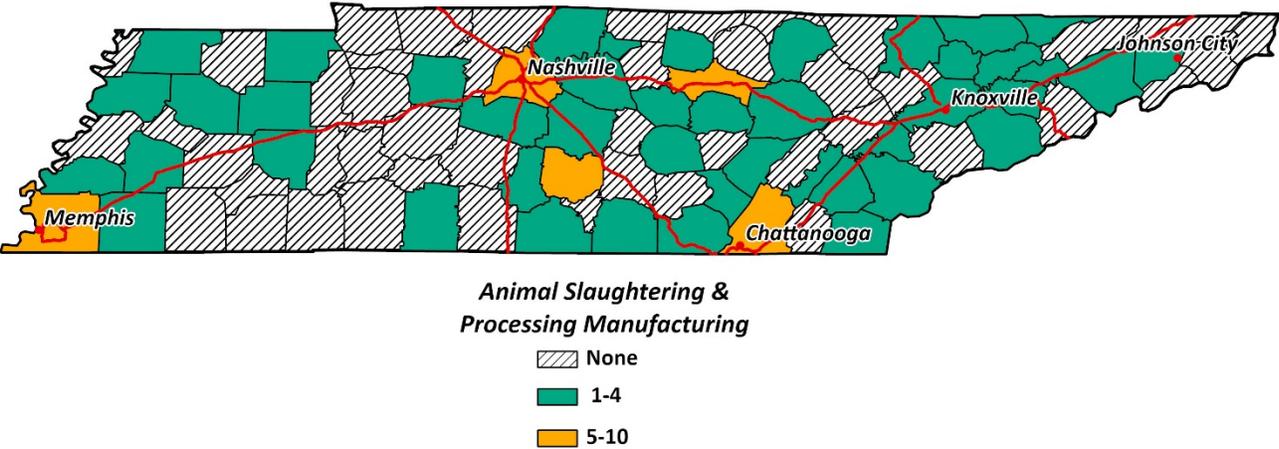


Figure 10. Number of Animal Slaughtering & Processing Establishments in Tennessee, 2023
 (Source: U.S. Department of Labor, 2024)

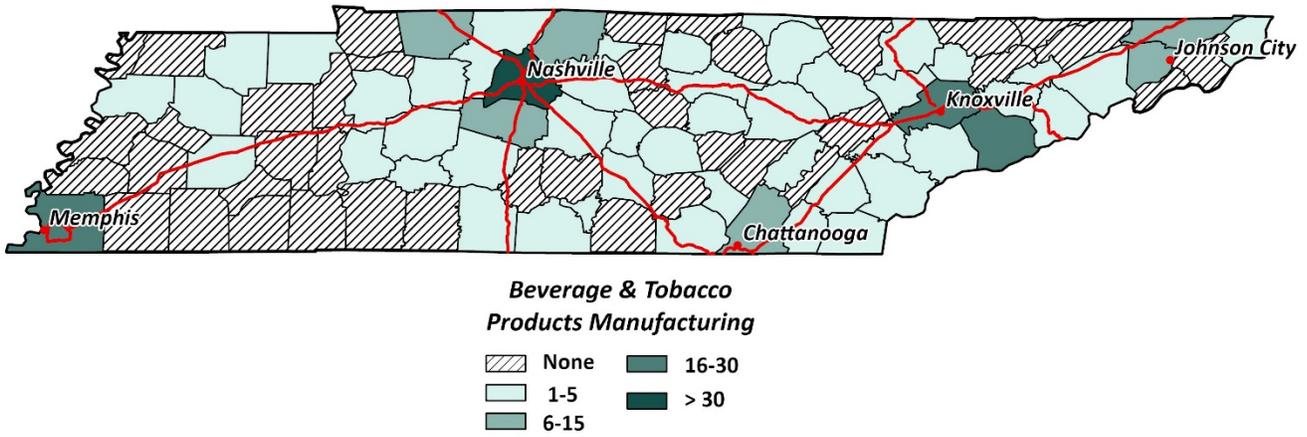


Figure 11. Number of Beverage and Tobacco Products Establishments in Tennessee, 2023
 (Source: U.S. Department of Labor, 2024)

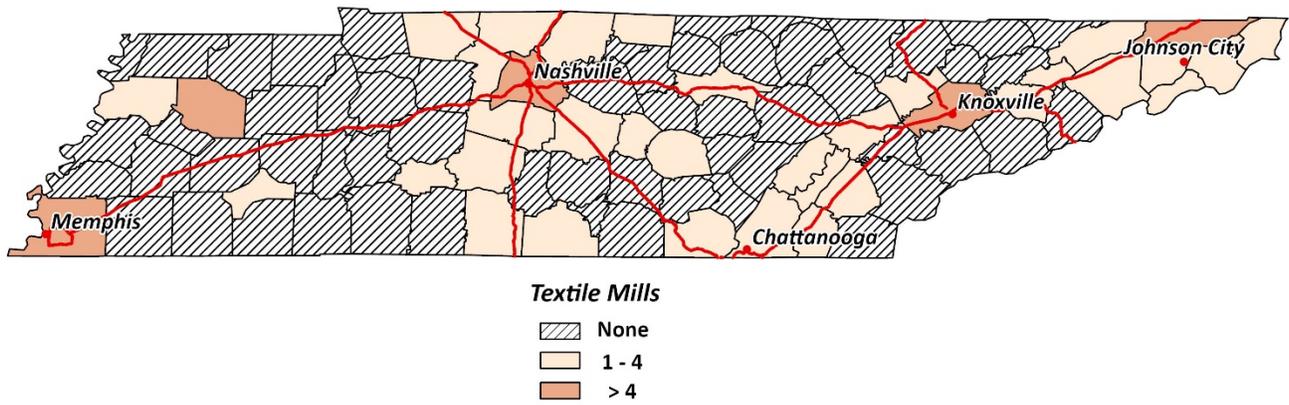


Figure 12. Number of Textile Mill Establishments in Tennessee, 2023
 (Source: U.S. Department of Labor, 2024)

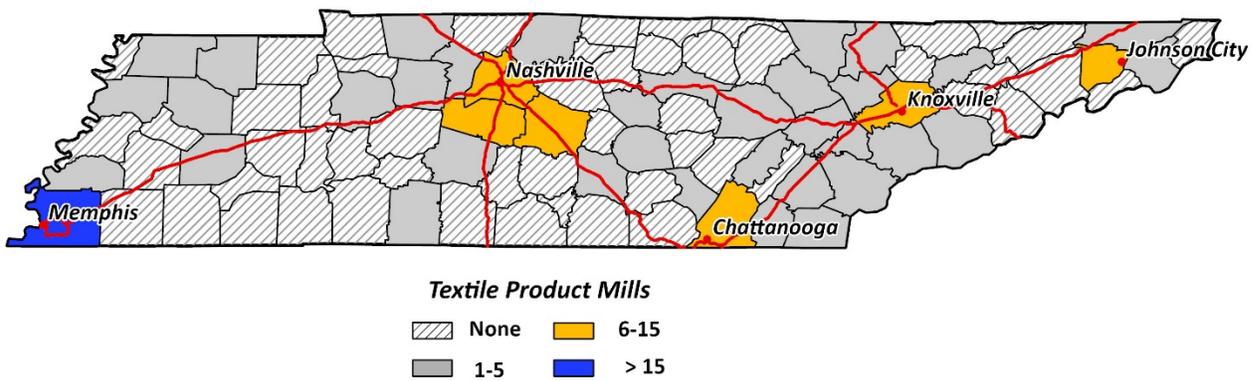


Figure 13. Number of Textile Product Mill Establishments in Tennessee, 2023
 (Source: U.S. Department of Labor, 2024)

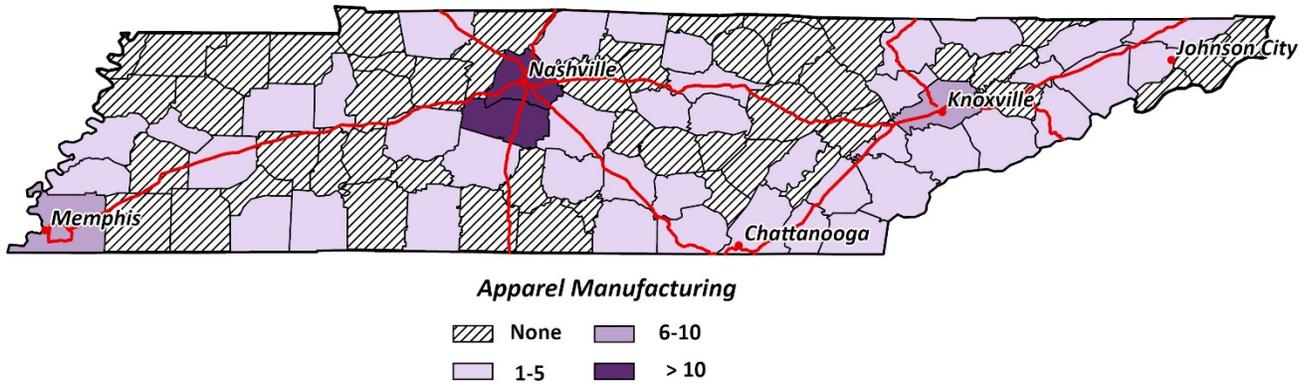


Figure 14. Number of Apparel Manufacturing Establishments in Tennessee, 2023
 (Source: U.S. Department of Labor, 2024)

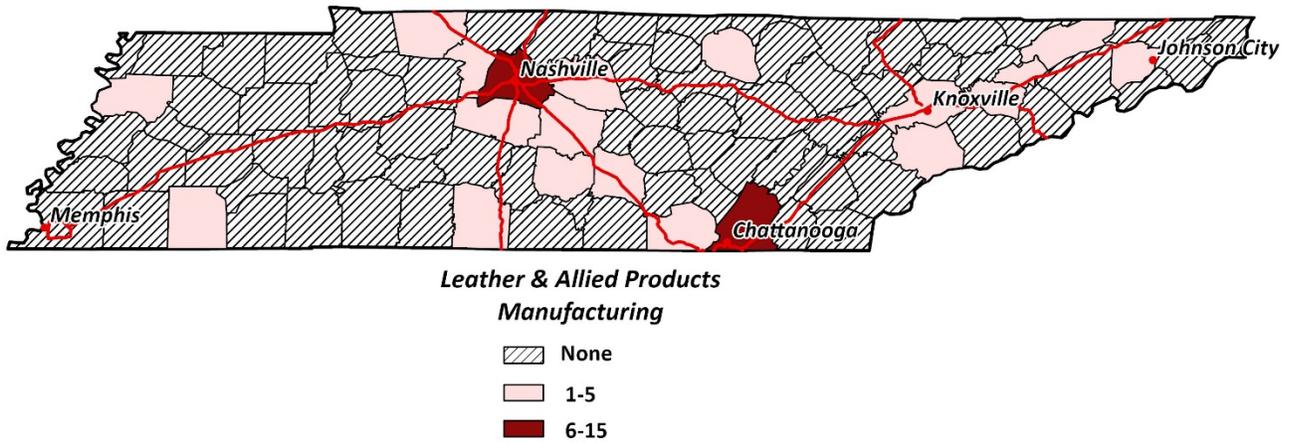


Figure 15. Number of Leather & Allied Product Establishments in Tennessee, 2023
 (Source: U.S. Department of Labor, 2024)

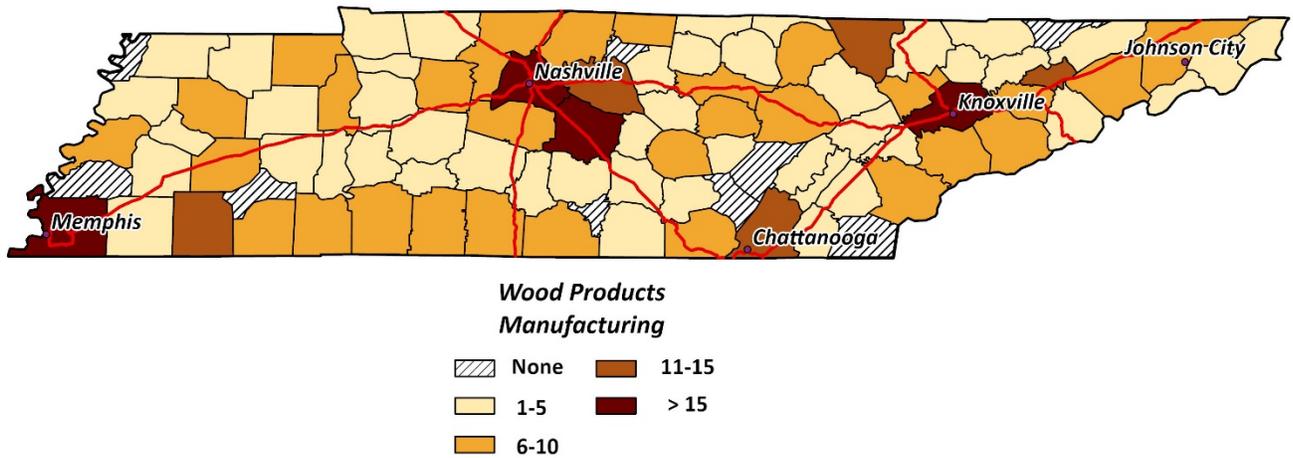


Figure 16. Number of Wood Products Manufacturing Establishments in Tennessee, 2023
 (Source: U.S. Department of Labor, 2024)

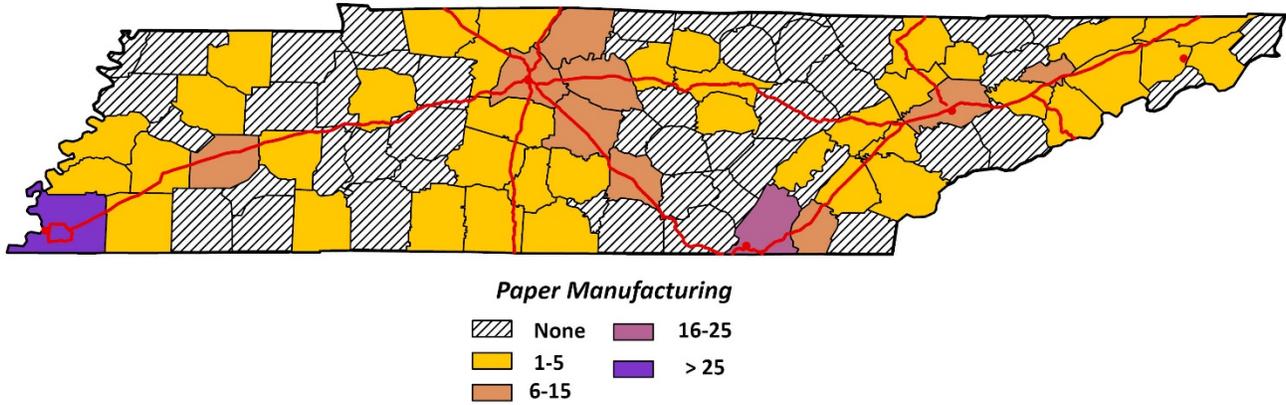


Figure 17. Number of Paper Manufacturing Establishments in Tennessee, 2023

(Source: U.S. Department of Labor, 2024)

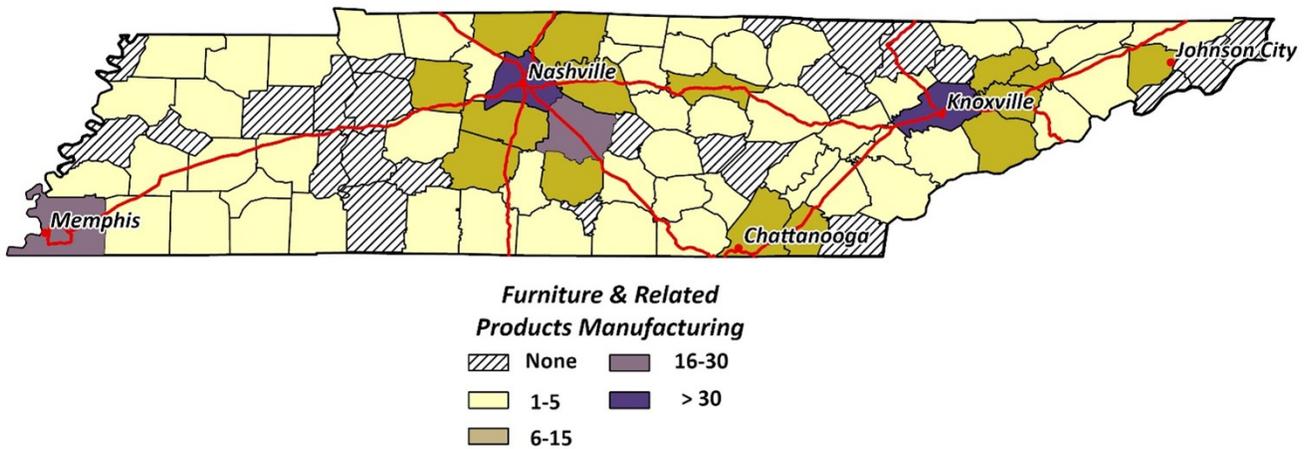


Figure 18. Number of Furniture & Related Products Establishments in Tennessee, 2023

(Source: U.S. Department of Labor, 2024)

Table 7. Agri-Forestry Manufacturing Statistics for Tennessee, 2022

Manufacturing Industry/NAICS Code	Employees (Number)	Annual Payroll (Thousand \$)	Value of Shipments (Thousand \$)
Food (311)	35,236	\$1,923,906	\$24,857,765
<i>Animal slaughtering/processing (3116)</i>	9,755	\$471,324	\$4,012,298
Beverage & tobacco products (312)	6,201	\$382,047	\$6,778,742
Textile mills (313)	2,938	\$171,929	\$1,136,679
Textile product mills (314)	2,185	\$87,942	\$408,223
Apparel (315)	2,460	\$66,797	\$258,757
Leather & allied products (316)	133	\$5,378	\$18,950
Wood products (321)	12,545	\$583,631	\$4,310,246
Paper (322)	10,631	\$712,764	\$6,702,564
Furniture & related products (337)	9,993	\$451,095	\$2,190,574
Total^a	82,322	\$4,385,489	\$46,662,500

^aValues for animal slaughtering and processing are included in food manufacturing (311) values.

Source: U.S. Census Bureau, 2025

State Level Changes in Livestock and Crops: 2021 to 2023

Comparing 2021 and 2023, statewide agricultural data revealed an increase in the numbers of chickens (excluding broilers), hogs and eggs, while the number of beef cattle and calves, milk cows along with broilers, decreased. Prices increased for all livestock products with the largest increase for broilers, followed closely by beef cattle and calves and eggs. Many of the traditional row crops grown in the state experienced decreased harvested acreage except for wheat, soybeans and hay. Crop prices only increased for hay and tobacco.

Livestock Changes in Inventory and Prices

Compared to 2021 production levels, the largest increases in livestock numbers were for all other chickens (36.1 percent), followed by hogs (4.9 percent) and eggs (3.0 percent). Milk cows experienced the largest decrease in numbers at 10.7 percent, followed by beef cattle (6.1 percent) and broilers (4.9 percent) (Table 8). Prices increased for all the major livestock products as reported in Table 8. The largest increase was for broilers at 34.0 percent, followed by beef cattle (33.3 percent), eggs (29.1 percent), hogs (14.9 percent), and all other chickens (16.7 percent) (USDA/NASS, 2024a, 2024b, 2024d, 2024e, 2024g, 2024h).

Table 8. Comparison of Tennessee Livestock Numbers and Prices, 2021 and 2023^a

Commodity	Inventory		Change	Units	Price		Change	Units
	2021	2023			2021	2023		
	(1,000)		%	1,000	(dollars/unit)		%	
All cattle & calves ^b	1,790	1,680	-6.1	head	\$110.44	\$147.17	33.3	100 lbs
All other chickens	3,103	4,223	36.1	no.	\$12.00	\$14.00	16.7	head
Broilers	195,300	185,700	-4.9	no.	\$0.53	\$0.71	34.0	pound
Eggs	377,400	388,600	3.0	no.	\$2.22	\$2.86	29.1	dozen
Milk cows	28	25	-10.7	head	--	--	--	head
All hogs ^b	305	320	4.9	head	\$65.72	\$75.53	14.9	100 lbs

^aData in nominal values

^bLive weight adjustments made for changes in inventory and in shipments and receipts includes marketing and sales of farm slaughter.

Source: USDA/NASS, 2024a, 2024b, 2024d, 2024e, 2024g, 2024h)

Crop Changes in Acres Planted and Prices

Comparing crop harvested acres for 2021 and 2023 for Tennessee's major crops, wheat had the largest increase at 18.2 percent, followed by soybeans (3.3 percent) and all hay (3.1 percent). The remaining major crops had decreased harvested acreage with tobacco having the largest decrease of 22.8 percent, followed by corn (-4.3 percent) and cotton (-3.7 percent) (Table 9). Wheat harvested acres increased from 330 to 390 thousand acres. Prices for all hay (15.6 percent increase) and tobacco (9.9 percent increase) increased for the timeframe examined. The largest price decreases were for cotton (18.2 percent), followed by corn (16.2 percent), wheat (1.7 percent) and soybeans (1.6 percent) (USDA/NASS, 2025a, 2025c).

Table 9. Comparison of Tennessee Crop Acreages and Prices, 2021 and 2023^a

Commodity	Harvested Acres			Price			Units
	2021	2023	Change	2021	2023	Change	
	1,000 acres		%	\$/unit		%	
Hay, all	1,665	1,716	3.1%	\$128.00	\$148.00	15.6%	ton
Corn	930	890	-4.3%	\$5.67	\$4.75	-16.2%	bushel
Soybeans	1,520	1,570	3.3%	\$12.80	\$12.60	-1.6%	bushel
Cotton	270	260	-3.7%	\$0.88	\$0.72	-18.2%	pound
Tobacco	11.6	9.0	-22.8%	\$2.63	\$2.89	9.9%	pound
Wheat	330	390	18.2%	\$6.87	\$6.75	-1.7%	bushel

^aData in Nominal Values

Source: USDA/NASS, 2025a, 2025c)

Special Section: Southern States Production Expenses

Based on the most recent 2022 Census of Agriculture, total farm production expenses are comprised of: **1)** fertilizer, lime and soil conditioners; **2)** chemicals; **3)** seed, plants, vines and trees; **4)** livestock and poultry; **5)** feed; **6)** gasoline, fuels; and oils; **7)** utilities; **8)** repairs, supplies and maintenance costs; **9)** hired farm labor; **10)** contract labor; **11)** custom work and custom hauling; **12)** cash rent for land, buildings and grazing fees; **13)** rent and lease expenses for machinery, equipment and farm share of vehicles; **14)** interest expense; **15)** property taxes; **16)** medical supplies, veterinary and custom services for livestock; and **17)** all other production expenses (defined as storage and warehousing, marketing and ginning expenses, insurance, etc.). And is defined as “expenses provided by producers, partners, landlords (excluding property taxes) and production contractors for the farm business” (USDA/NASS, 2024i).

Based on Census data from 2002 to 2022 for fourteen Southern states, all states experienced higher overall production expenses (Table 10 in descending order based on change from 2017 to 2022). For 2017 to 2022, the top three states with largest increases in production expenses were Louisiana (44.4 percent increase), Alabama (39.5 percent) and North Carolina (38.5 percent). Tennessee’s production expense increase for that timeframe was 31.6 percent. The lowest increases were Oklahoma (15.3 percent), Texas (21.7 percent) and Virginia (21.6 percent). For the 20-year timeframe, 2002 to 2022, Alabama, Arkansas and South Carolina had the largest production expense increases, whereas Florida, Oklahoma and Texas had the lowest. Tennessee’s was 22.5 percent.

For the production categories tracked, the top five production expense categories summed across all 14 Southern states were feeds purchased (28.9 percent of the total \$112.3 billion); livestock and poultry purchased or leased (15.2 percent); hired farm labor (8.5 percent); fertilizer, lime and soil conditioners purchased (6.6 percent); and repairs, supplies and maintenance costs (5.8 percent). The five lowest were property taxes paid (2.2 percent); custom work and custom hauling (2.1 percent); contract labor (1.9 percent); medical supplies, veterinary and custom services for livestock (1.2 percent); and rent and lease expenses for machinery, equipment and farm share of vehicles (0.6 percent) (USDA/NASS, 2024i).

Table 10. Total Farm Production Expenses for Selected Southern States							
State	2002	2007	2012	2017	2022	Δ 2017-2022	Ave Δ 2002-2022
			<i>(Million \$)</i>				
LA	\$1,615.6	\$2,119.0	\$2,820.1	\$2,610.9	\$3,770.3	44.4%	25.3%
AL	\$2,588.6	\$3,922.1	\$4,736.3	\$4,615.6	\$6,440.4	39.5%	27.3%
NC	\$5,645.5	\$8,309.8	\$10,061.2	\$9,281.4	\$12,858.7	38.5%	24.8%
MD	\$1,127.6	\$1,546.6	\$1,940.3	\$1,968.8	\$2,632.0	33.7%	24.4%
MS	\$2,767.8	\$4,288.7	\$5,158.7	\$4,386.5	\$5,858.1	33.5%	23.5%
SC	\$1,313.2	\$2,012.2	\$2,575.8	\$2,387.0	\$3,178.3	33.1%	26.8%
AR	\$3,898.3	\$6,134.9	\$7,701.3	\$7,095.9	\$9,411.2	32.6%	26.9%
TN	\$1,996.8	\$2,620.8	\$3,174.8	\$3,360.9	\$4,421.3	31.6%	22.5%
FL	\$4,734.6	\$5,762.9	\$6,484.5	\$6,507.3	\$8,492.6	30.5%	16.3%
GA	\$3,845.5	\$5,982.3	\$7,488.5	\$7,113.1	\$9,247.1	30.0%	26.4%
KY	\$2,604.1	\$3,930.2	\$4,778.1	\$4,704.5	\$6,105.3	29.8%	25.2%
VA	\$2,045.6	\$2,711.5	\$3,494.7	\$3,431.8	\$4,354.2	26.9%	21.6%
TX	\$13,734.7	\$19,223.1	\$25,404.9	\$22,909.3	\$27,877.4	21.7%	21.0%
OK	\$4,069.1	\$5,223.4	\$6,682.8	\$6,643.9	\$7,657.2	15.3%	17.7%
			Total	\$87,016.6	\$112,304.1		

Source: USDA/NASS, 2024i

2023 Economic Contributions and Importance of Tennessee’s Agricultural and Forestry Industrial Complex

This section of the analysis updates the 2021 economic contributions and importance of the agricultural and forestry industrial complex on Tennessee’s economy section (Menard, 2023)⁹ using an input-output model to reflect the state’s 2023 economy to determine direct economic contributions on related input industries and economic contributions through resulting expenditures by households at the state level. Like the 2021 study, economic contributions are provided for four major metrics: total industry output (a measure of economic activity), employment, labor income and value-added (gross regional product or GRP). For this analysis, agriculture¹⁰ and forestry includes the production and processing of agricultural and forest products and the input suppliers of these products.

As an inflation overview, the rate of consumer prices increasing was lower in 2023 compared to 2022 data, increasing 3.4 percent for all items compared to 6.5 percent from December 2021 to December 2022. Food at home increased 2.8 percent, whereas food away from home increased 5.2 percent. For food at home, cereals and bakery products experienced the largest increase at 2.6 percent; followed by meats, poultry and fish (2.3 percent); and fruits and vegetables (0.3 percent). Eggs decreased 23.8 percent. Energy, overall, decreased 2.0 percent. Within that category, fuel oil experienced the largest decrease at 14.7 percent, followed by utility (piped) gas service at 13.8 percent. Electricity, however, increased 3.3 percent. Motor

⁹For additional details on the previous study see Menard, 2023 in references section.

¹⁰In this report, forestry and the production of forest products were incorporated into agriculture and agribusiness, respectively.

vehicle insurance, nonprescription drugs and shelter had the largest increases at 20.3 percent, 8.3 percent and 6.2 percent, respectively (USBLS, 2024).

The Tennessee Agri-Industry Model (TN-AIM) is based on the Impact Analysis for Planning (IMPLAN) Cloud platform (Release 25.1) model and its databases (IMPLAN Group LLC, 2023) (see *Appendix A* for additional information on IMPLAN's methods). Expenditures by agriculture and forestry industries for goods and services, land, labor, capital equipment and other materials enhance Tennessee's economy and the state's tax base. The economic benefits generated from these activities can be measured in terms of the number of jobs supported and the amount of personal income accruing to residents. These impact measures can be further broken down into **direct**, plus **indirect** and **induced** (or *ripple*) effects. Total economic contributions attributable to increased business activity are computed as the sum of the direct, indirect and induced effects. **Direct** effects are those attributable specifically to the industries expenditures in a region (i.e., in this study agriculture/forestry input industries, commodity agriculture, logging, agriculture/forestry value-added industries). **Indirect** effects arise from the industries' expenditures on raw materials, supplies and other operating expenses, which help to support jobs in other local businesses. **Induced**, or *ripple* effects, are created as the new income generated by the direct and indirect effects is spent and re-spent within the local economy. In this analysis only the **direct** and **total** (direct + indirect + induced) expenditures are shown.

Output from TN-AIM includes descriptive metrics of the economy including total industry output (a measure of economic activity), employment, labor income and total value-added for 528 industries in the Tennessee economy (*Appendix B*). **Total industry output** is defined as the value of production by industry per year or a measure of overall economic activity by that industry. **Employment** represents the total wage and salary of employees, plus self-employed jobs in a region, for both full-time and part-time workers. **Labor income** is defined as employee compensation (pay plus the value of certain benefits) and proprietary (owner-operator) income. **Total value added** is defined as all income to workers paid by employers; self-employed income; interests, rents, royalties, dividends and profit payments; and excise and sales taxes collected by businesses from individuals. It is equivalent to state Gross Regional Product (GRP), which is analogous to Gross Domestic Product for the entire U.S.

In this report, Tennessee's agri-forestry industrial complex (Figure 1 on page i) is defined to include the industries typically associated with agriculture and forest operations such as **Agriculture Inputs** (i.e., lime, fertilizer, chemicals and machinery), commodity agriculture such as growing crops and the breeding of livestock (**Primary Agriculture**) and value-added sub-sectors such as food and beverage manufacturing, apparel and textiles and tobacco products (**Secondary Agriculture**). **Forestry Inputs** includes sawmill, woodworking and paper machinery; timber tract operations; and commercial logging. **Primary Forestry**

includes sawmills, wood preservation along with pulp-, paper- and paperboard mills. Forestry products manufacturing comprises the *Secondary Forestry* designation used in the analyses.

Tennessee’s 2023 Agricultural Economic Contribution Results

Tennessee’s economy was \$980.1 billion in output (economic activity) in 2023. The services industry was the largest sector of the economy at \$330.2 billion in economic activity and more than 2.1 million jobs (Table 11).¹¹ The agri-forestry industrial complex ranked fifth in terms of direct total industry output at \$65.9 billion. The state’s value-added, or GRP, is estimated at \$531.3 billion with the agri-forestry industrial complex contributing \$21.4 billion towards the state’s GRP. For every dollar of sales, the agri-forestry industrial complex directly contributed \$0.32 to the state’s GRP, which is higher than manufacturing’s direct contribution at \$0.29.

Table 11. Estimated Economic Indicators for Tennessee, 2023

Sector	TIO ^a	TVA ^b	Jobs	TVA/Job	TVA/TIO
	(Billion \$)		(1,000)		
Services	\$330.2	\$202.4	2,134.7	\$94,837	0.61
Manufacturing	\$168.1	\$48.1	270.5	\$177,933	0.29
Real Estate	\$83.0	\$59.2	201.3	\$294,088	0.71
Government	\$66.0	\$50.1	492.3	\$101,767	0.76
Agri-Forest Industry^c	\$65.9	\$21.4	188.6	\$113,468	0.32
Agriculture^c	\$47.8	\$14.7	148.6	\$98,923	0.31
Inputs	\$2.4	\$0.8	3.0	\$250,667	0.31
Primary Agriculture	\$5.5	\$2.0	82.7	\$24,184	0.36
Secondary Agriculture	\$39.9	\$11.9	62.9	\$189,189	0.30
Forestry^c	\$18.1	\$6.7	40.0	\$167,500	0.37
Inputs	\$0.3	\$0.2	2.9	\$60,690	0.59
Primary Forestry	\$4.6	\$1.9	5.3	\$358,491	0.41
Secondary Forestry	\$13.1	\$4.6	31.8	\$144,654	0.35
Wholesale Trade	\$60.4	\$34.6	149.2	\$231,903	0.57
Retail Trade	\$49.7	\$37.1	397.8	\$93,263	0.75
Construction	\$49.3	\$24.8	286.0	\$86,713	0.50
Finance	\$34.6	\$16.2	159.6	\$101,504	0.47
Insurance	\$28.9	\$13.8	75.7	\$182,299	0.48
Transportation	\$27.0	\$14.0	138.4	\$101,156	0.52
Utilities	\$7.1	\$3.8	5.0	\$760,000	0.54
Miscellaneous	\$6.5	\$4.5	66.3	\$67,873	0.69
Mining	\$3.4	\$1.2	7.3	\$164,384	0.35
Total^c	\$980.1	\$531.3	4,572.7		

^aTotal Industry Output – annual value of production by industry.

^bTotal Value Added – income to workers paid by employers; self-employed income; interest, rents, royalties, dividends, and profit payments; and production and import taxes.

^cTotals may not add due to rounding.

Source: IMPLAN Group, LLC, 2023 Data

¹¹Agricultural services (i.e., landscape/horticultural services (NAICS 561730) and veterinary services (NAICS 541940)) are excluded.

2023 State Level Direct Economic Contributions

Direct economic activity for total industry output (TIO), employment, labor income and total value-added (TVA) for agriculture and forestry for the state are presented in Table 12. ***In 2023, agriculture and forestry related industries contributed a total of \$66.0 billion in direct economic activity to the state of Tennessee, or 6.7 percent of the state’s economy. Direct employment in agriculture and forestry related industries was 188.6 thousand persons, or 4.1 percent of the workforce. Direct total value added was \$21.4 billion, including \$8.9 billion in labor income.*** Much of the industry output generated from agri-forestry industrial complex was generated through secondary or manufactured products. For agriculture, approximately 55.7 percent of the workforce was employed in primary agriculture (crop and livestock commodities), 42.3 percent in secondary agriculture (food and beverage, tobacco products and textile manufacturing) and 2.0 percent in agricultural inputs (agricultural chemicals and machinery). For forestry, 79.5 percent of the forestry workforce was employed in secondary forestry (wood products manufacturing), 13.2 percent in primary forestry (pulp, paper and paperboard mills; sawmills; and wood preservation), and 7.4 percent in forestry inputs (forestry machinery, timber tract production¹² and commercial logging).

Table 12. Direct Economic Activity in Agriculture and Forestry for Tennessee, 2023

Sector	TIO ^a (Million \$)	Employment (Number)	Labor Income ^b (Million \$)	TVA ^c (Million \$)
All Sectors^d	980,054	4,572,710	327,466	531,314
Agriculture & Forestry	65,929	188,579	8,862	21,395
Agriculture	47,839	148,581	5,696	14,664
Inputs	2,410	3,007	257	752
Primary Agriculture	5,529	82,684	584	2,024
Secondary Agriculture	39,901	62,890	4,855	11,888
Forestry	18,090	39,998	3,166	6,731
Inputs	313	2,946	167	235
Primary Forestry	4,629	5,262	567	1,918
Secondary Forestry	13,147	31,790	2,432	4,578

^aTotal Industry Output - annual value of production by industry.

^bLabor Income - employment compensation (wage and salaries plus benefits) and proprietary income (payments received by self-employed individuals and unincorporated business owners).

^cTotal Value Added - income to workers paid by employers; self-employed income; interest, rents, royalties, dividends, and profit payments; and production and import taxes.

^dIncludes non-agricultural and non-forestry (total economy).

Agricultural and Forestry Inputs:

The largest output value for agricultural inputs was from agricultural machinery followed by agricultural chemicals (Table 13). Approximately 66.6 percent of the total value for total industry output came

¹²Includes growing trees for reforestation; growing forest products such as gums, barks, balsam needles, rhizomes, fibers, and ginseng; and timber tracts for selling timber.

from agricultural machinery. Agricultural machinery also had the largest employment, labor income, and total value added. For forestry inputs, commercial logging had the largest output value, employment, labor income, and total value added. Sawmills, woodworking, and paper machinery had the next largest output value, employment, and labor income but forestry, forest products, and timber tract production had the largest total value added. A more detailed presentation of the total industry output from processing by sub-sector is shown in *Appendixes C and D*.

Table 13. Direct Economic Activity in Agricultural and Forestry Inputs, 2023

Sector	TIO ^a	Employment	Labor Income ^b	TVA ^c
	(Million \$)	(Number)	(Million \$)	(Million \$)
Total Agriculture Inputs	2,410	3,007	257	752
Agricultural Machinery	1,605	2,449	181	484
Agricultural Chemicals	805	558	76	268
Total Forestry Inputs	313	2,946	167	235
Commercial Logging	230	2,620	141	219
Sawmills, Woodworking, & Paper Machinery	72	209	19	6
Forestry, Forest Products, & Timber Tract Operations	11	116	7	10

^aTotal Industry Output – annual value of production by industry.

^bLabor Income – employment compensation (wage and salaries plus benefits) and proprietary income (payments received by self-employed individuals and unincorporated business owners).

^cTotal Value Added – income to workers paid by employers; self-employed income; interests, rents, royalties, dividends, and profit payments; and production and import taxes.

Primary and Secondary Agricultural Products:

The largest output value (18.4 percent) in the state for agriculture commodities from farm production was from oilseed farming (primarily soybeans) (Table 14), followed by grain farming (17.2 percent); poultry and egg production (17.0 percent); beef cattle farming (16.1 percent); greenhouse, nursery and floriculture production (7.7 percent); cotton farming (4.9 percent); agriculture and forestry support activities (4.7 percent); animal production, except cattle, poultry and eggs (3.7 percent); vegetable and melon farming (3.1 percent); all other crop farming (primarily hay/seed farming) (3.0 percent);¹³ dairy cattle and milk production (1.8 percent); and tobacco farming (1.2 percent). In terms of labor income, agriculture and forestry support activities had the largest value, followed by greenhouse, nursery and floriculture production; poultry and egg production; cotton farming; grain farming; oilseed farming; all other crop farming (primarily hay/seed farming); animal production, except cattle, poultry and eggs; vegetable and melon farming; and beef cattle farming. The largest total value-added contributors included oilseed farming (primarily soybeans); greenhouse, nursery and floriculture production; agriculture and forestry support activities; poultry and egg production;

¹³Includes support activities for crop production (i.e., cotton ginning; soil preparation, planting, and cultivating; crop harvesting; and farm management services), animal production (i.e., breeding services, pedigree record services boarding horses, dairy herd improvement activities, livestock spaying, and sheep dipping and shearing), and forestry (i.e., estimated timber, forest fire-fighting, forest pest control, and consulting on wood attributes and reforestation).

Table 14. State Level: Direct Economic Activity in Farm Production, 2023

Rank	Sector	TIO ^{a,b} (Million \$)	Employment (Number)	Labor Income ^c (Million \$)	TVA ^d (Million \$)
	All Farm Production	5,529	82,684	584	2,024
1	Oilseed farming	1,018	7,173	30	621
2	Grain farming	954	8,505	41	2
3	Poultry & egg production	937	2,190	48	220
4	Beef cattle farming	888	26,516	13	189
5	Greenhouse, nursery, & floriculture production	424	5,624	86	252
6	Cotton farming	272	1,251	47	97
7	Agriculture & forestry support activities	262	7,278	238	246
8	Animal production, except cattle/poultry/eggs	206	8,141	23	138
9	Vegetable & melon farming	172	2,734	18	85
10	All other crop farming	166	10,549	23	66
11	Dairy cattle & milk production	102	676	5	25
12	Tobacco farming	67	517	9	36
13	Commercial hunting & trapping	26	199	0	24
14	Fruit farming	21	681	3	9
15	Commercial fishing	13	544	-2	13
16	Tree nut farming	2	105	1	2

^aTotal Industry Output – annual value of production by industry.

^bA value of production measure that includes on-farm consumption, and it is net of inventory changes.

^cLabor Income – employment compensation (wage and salaries plus benefits) and proprietary income (payments received by self-employed individuals and unincorporated business owners).

^dTotal Value Added – income to workers paid by employers; self-employed income; interests, rents, royalties, dividends, and profit payments; and production and import taxes.

^eValues of zero are nonzero values less than 1.

beef cattle farming; animal production, except cattle, poultry and eggs; cotton farming; vegetable and melon farming; all other crop farming (primarily hay/seed farming); and tobacco farming.

Among secondary agricultural products, food manufacturing contributed the largest total industry output, followed by beverage manufacturing, tobacco products manufacturing, textile mills, apparel manufacturing, textile product mills and leather and allied product manufacturing (Table 15). Approximately 74.4 percent of the total value of total industry output from processed agricultural products came from food manufacturing. In addition, food manufacturing employed the largest number of workers, had the largest amount of labor income, and contributed the largest amount in total value added when compared to other agriculture value added industries.

Table 15. Direct Economic Activity in Secondary Agricultural Products, 2023

Sector	TIO ^a	Employment	Labor Income ^b	TVA ^c
	(Million \$)	(Number)	(Million \$)	(Million \$)
Total Secondary Agriculture	39,901	62,890	4,855	11,888
Food Manufacturing	29,703	45,692	3,671	7,681
Beverage Manufacturing	4,023	6,616	502	1,511
Tobacco Products Manufacturing	3,928	970	114	2,032
Textile Mills	1,098	2,932	206	235
Apparel Manufacturing	543	3,938	209	238
Textile Product Mills	516	2,310	130	164
Leather & Allied Product Manufacturing	91	433	24	27

^aTotal Industry Output – annual value of production by industry.

^bLabor Income – employment compensation (wage and salaries plus benefits) and proprietary income (payments received by self-employed individuals and unincorporated business owners).

^cTotal Value Added – income to workers paid by employers; self-employed income; interests, rents, royalties, dividends, and profit payments; and production and import taxes.

Primary and Secondary Forest Products:

The largest output, employment, labor income and total value-added values for primary forest products was from paper mills (Table 16). Approximately 71.0 percent of the total value of total industry output from primary forest products came from paper mills (43.0 percent) and paperboard mills (28.0 percent). Sawmills, paper mills and paperboard mills employed the largest numbers.

Table 16. Direct Economic Activity in Primary Forest Products, 2023

Sector	TIO ^a	Employment	Labor Income ^b	TVA ^c
	(Million \$)	(Number)	(Million \$)	(Million \$)
Total Primary Forest Products	4,629	5,262	567	1,918
Paper Mills	1,992	1,616	258	1,015
Paperboard Mills	1,296	1,062	155	575
Sawmills	1,212	2,447	138	281
Wood Preservation	81	80	7	29
Pulp Mills	49	57	8	19

^aTotal Industry Output – annual value of production by industry.

^bLabor Income – employment compensation (wage and salaries plus benefits) and proprietary income (payments received by self-employed individuals and unincorporated business owners).

^cTotal Value Added – income to workers paid by employers; self-employed income; interests, rents, royalties, dividends, and profit payments; and production and import taxes.

For secondary forest products, paper manufacturing had the largest output value, followed by furniture and related products manufacturing; other wood products; wood windows and doors and millwork; manufactured homes manufacturing; and veneer, plywood and engineered wood product manufacturing (Table 17). The paper manufacturing sector was comprised of paperboard containers, paper bags and coated and treated paper, stationery products, sanitary products and other converted paper products. Furniture and related products manufacturing was comprised of household and institutional, office and other (mattress, blind and shades) furniture categories. The other wood products manufacturing category was comprised of

Table 17. Direct Economic Activity in Secondary Forest Products, 2023

Sector	TIO ^a	Employment	Labor	TVA ^c
	(Million \$)		Income ^b	
Total Secondary Forest Products	13,147	31,790	2,432	4,578
Paper Manufacturing	6,759	10,223	924	2,409
Furniture & Related Products Manufacturing	1,795	7,581	475	516
Other Wood Products Manufacturing	1,269	5,215	328	460
Wood Windows & Doors & Millwork Manufacturing	1,221	3,535	255	467
Manufactured Homes Manufacturing	1,190	3,434	306	413
Veneer, Plywood, & Engineered Wood Products Manufacturing	913	1,803	144	313

^aTotal Industry Output – annual value of production by industry.

^bLabor Income – employment compensation (wage and salaries plus benefits) and proprietary income (payments received by self-employed individuals and unincorporated business owners).

^cTotal Value Added – income to workers paid by employers; self-employed income; interests, rents, royalties, dividends, and profit payments; and production and import taxes.

wood containers and pallets, all other miscellaneous wood products, and wood kitchen cabinets and countertops.

2023 Estimated Total Economic Contributions of Agriculture and Forestry

The estimated total (multiplier-based) economic impacts of agriculture and forestry included not only includes the direct impacts from the industry but also the impacts the industry had on input supplying industries (indirect impacts) and on expenditures by households (induced impacts). Thus, the total economic impacts from agriculture and forestry included direct, indirect and induced impacts. Table 18 includes values for total industry output, employment, labor income and value added resulting from agriculture and forestry, including the indirect and induced impacts. Agriculture and forestry contributed an estimated value of \$103.8

Table 18. Estimated Total Economic Contributions from Agriculture and Forestry, 2023

Sector	TIO ^a	Employment	Labor	TVA ^c
	(Million \$)		Income ^b	
Agriculture & Forestry	103,810	390,583	20,904	42,057
Agriculture	74,749	299,180	14,048	29,129
Inputs	3,685	8,423	671	1,447
Primary Agriculture	8,059	92,540	1,315	3,362
Secondary Agriculture	63,006	198,217	12,062	24,320
Forestry	29,061	91,402	6,856	12,928
Inputs	525	4,145	248	365
Primary Forestry	7,377	18,509	1,518	3,494
Secondary Forestry	21,160	68,749	5,090	9,069

^aTotal Industry Output – annual value of production by industry.

^bLabor Income – employment compensation (wage and salaries plus benefits) and proprietary income (payments received by self-employed individuals and unincorporated business owners).

^cTotal Value Added – income to workers paid by employers; self-employed income; interests, rents, royalties, dividends, and profit payments; and production and import taxes.

billion to Tennessee’s \$980.1 billion economy in 2023. A more detailed total impact presentation of output, employment, labor income, and value added by sub-sector is shown in *Appendix D* of this document.

Agricultural and Forestry Inputs Total Contributions:

The largest total (multiplier-based) impact for all four variables measured for agricultural inputs was for agricultural machinery (Table 19). Agricultural machinery comprised 68.1 percent of the impact on output. Lawn and garden equipment manufacturing was the largest output contributor for total agricultural inputs (see *Appendix D*). For total forestry inputs, commercial logging had the largest output value, employment, labor income and total value added, followed by sawmills, woodworking and paper machinery.

Table 19. Estimated Total Economic Contributions from Agricultural and Forestry Inputs, 2023

Sector	TIO ^a	Employment	Labor Income ^b	TVA ^c
	(Million \$)	(Number)	(Million \$)	(Million \$)
Total Agriculture Inputs	3,685	8,423	671	1,447
Agricultural Machinery	2,511	6,366	479	976
Agricultural Chemicals	1,174	2,057	192	471
Total Forestry Inputs	525	4,145	248	365
Commercial Logging	350	3,323	183	294
Sawmills, Woodworking, & Paper Machinery	157	660	55	57
Forestry, Forest Products, & Timber Tract Operations	17	162	10	14

^aTotal Industry Output – annual value of production by industry.

^bLabor Income – employment compensation (wage and salaries plus benefits) and proprietary income (payments received by self-employed individuals and unincorporated business owners).

^cTotal Value Added – income to workers paid by employers; self-employed income; interests, rents, royalties, dividends, and profit payments; and production and import taxes.

Primary and Secondary Agricultural Products Total Contributions:

Figures 19 through 24 depict the estimated direct, indirect and induced impacts for Tennessee’s top agricultural commodities from farm production (oilseeds; grains; vegetables and melons; greenhouse, nursery and floriculture production; tobacco; cotton; all other crops (primarily hay/seeds); beef cattle; dairy cattle and milk production; poultry and egg production; and animal production, except cattle, poultry and eggs). The top five indirect and induced sectors impacted based on output value are also listed. Using oilseed farming as an example, which had direct sales of \$1.0 billion, the indirect economic impacts from input supplying industries are \$235.1 million (17.7 percent of the \$1.3 billion in total impact) and the induced impacts or expenditures by households are \$74.5 million (5.6 percent). The top five sectors most impacted from the indirect impact (in descending order) included wholesale trade (nondurable goods merchants), pesticides and other agricultural chemicals, truck transportation, other real estate and other local government enterprises. Likewise, from household expenditures (induced impacts) the sectors most impacted (in descending order) based on output value included owner-occupied dwellings, hospitals, office of physicians, limited-service restaurants and full-service restaurants.

Indirect Effects: Million \$

Total: \$235.067 (17.7%)

Wholesale Trade (Nondurable Goods Merchants): \$54.898

Pesticide & Other Agricultural Chemicals: \$23.974

Truck Transportation: \$22.302

Other Real Estate: \$12.667

Other Local Govt. Enterprises: \$8.448

Induced Effects: Million \$

Total: \$74.499 (5.6%)

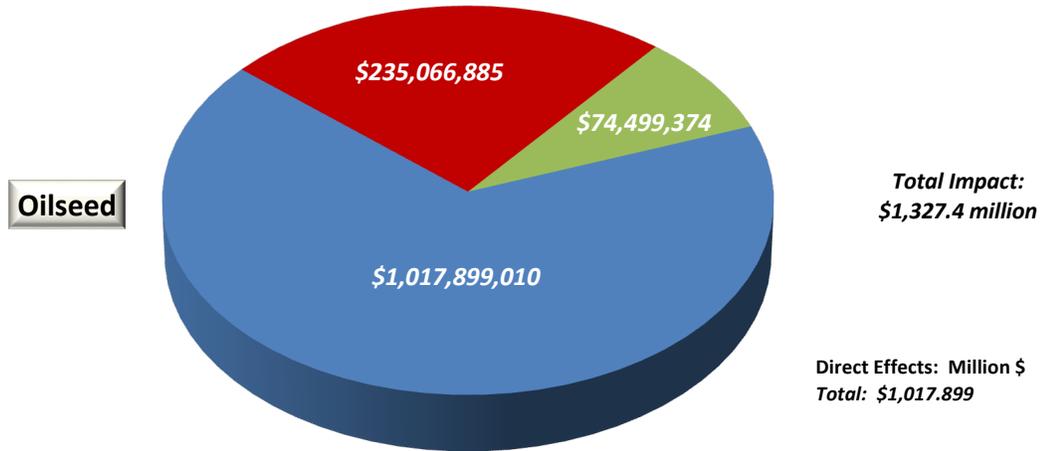
Owner-Occupied Dwellings: \$8.687

Hospitals: \$4.599

Office of Physicians: \$3.035

Limited-Service Restaurants: \$2.528

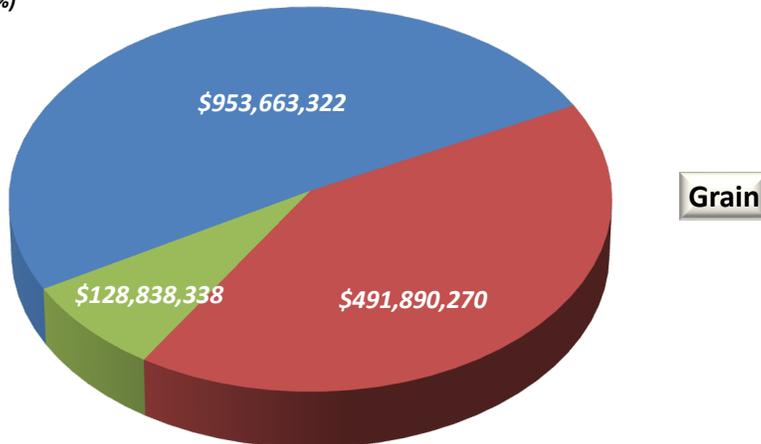
Full-Service Restaurants: \$2.251



Direct Effects: Million \$

Total: \$953.362 (60.6%)

Total Impact
\$1,574.4 million



Induced Effects: Million \$

Total: \$128.838 (8.2%)

Owner-Occupied Dwellings: \$15.042

Hospitals: \$7.958

Office of Physicians: \$5.251

Limited-Service Restaurants: \$4.373

Full-Service Restaurants: \$3.898

Indirect Effects: Million \$

Total: \$491.890 (31.2%)

Wholesale Trade (Nondurable Goods Merchants): \$90.978

Pesticide & Other Agricultural Chemicals: \$82.235

Other Real Estate: \$34.685

Truck Transportation: \$26.047

Other Local Govt. Enterprises: \$22.263

Figure 19. Estimated Direct, Indirect and Induced Contributions for Oilseed Farming and Grain Farming

Indirect Effects: Million \$

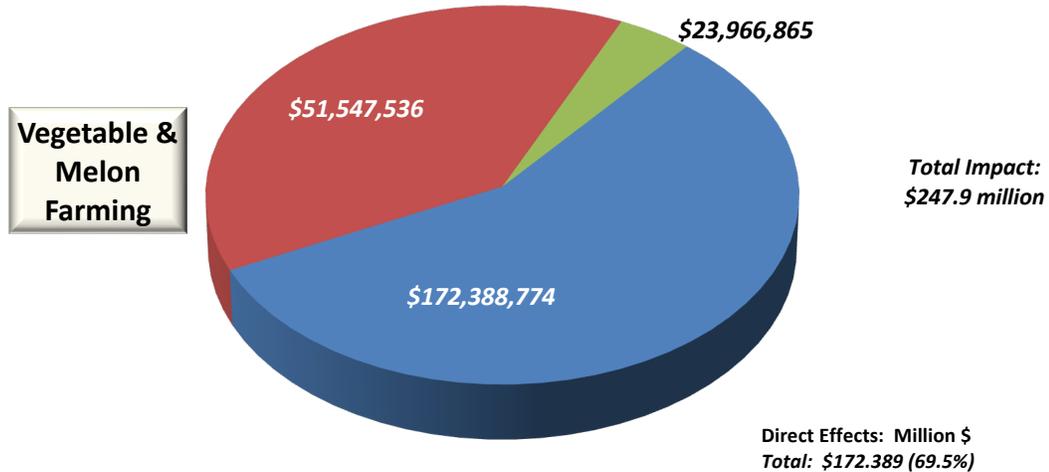
Total: \$51.547 (20.8%)

- Pesticide & Other Agricultural Chemicals: \$9.116
- Wholesale Trade (Nondurable Goods Merchants): \$5.675
- Other Local Govt. Enterprises: \$2.912
- Other Real Estate: \$1.841
- Insurance Agents, Brokerages, & Related Activities: \$1.778

Induced Effects: Million \$

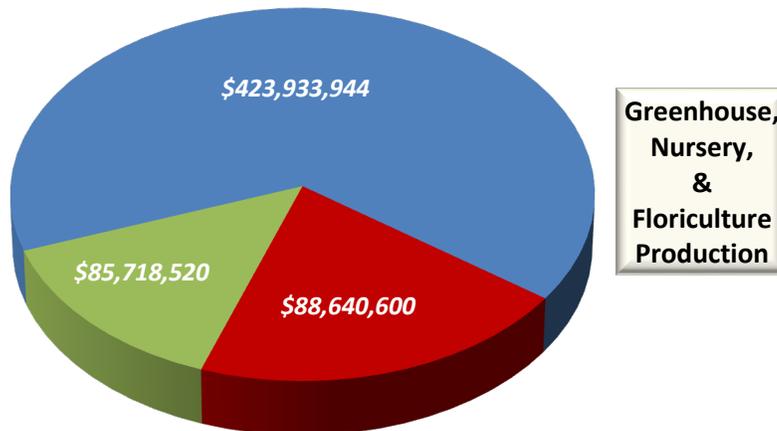
Total: \$23.967 (9.7%)

- Owner-Occupied Dwellings: \$2.795
- Hospitals: \$1.480
- Office of Physicians: \$0.977
- Limited-Service Restaurants: \$0.815
- Full-Service Restaurants: \$0.724



Direct Effects: Million \$
Total: \$423.934 (70.9%)

Total Impact:
\$598.3 million



Induced Effects: Million \$

Total: \$85.718 (14.3%)

- Owner-Occupied Dwellings: \$9.991
- Hospitals: \$5.295
- Office of Physicians: \$3.495
- Limited-Service Restaurants: \$2.915
- Full-Service Restaurants: \$2.589

Indirect Effects: Million \$

Total: \$88.641 (14.8%)

- Wholesale Trade (Nondurable Goods Merchants): \$15.633
- Pesticide & Other Agricultural Chemicals: \$7.991
- Truck Transportation: \$6.436
- Insurance Agents, Brokerages, & Related Activities: \$4.016
- Petroleum Refineries: \$3.350

Figure 20. Estimated Direct, Indirect, and Induced Contributions for Vegetable & Melon Farming and Greenhouse, Nursery & Floriculture Production

Indirect Effects: Million \$

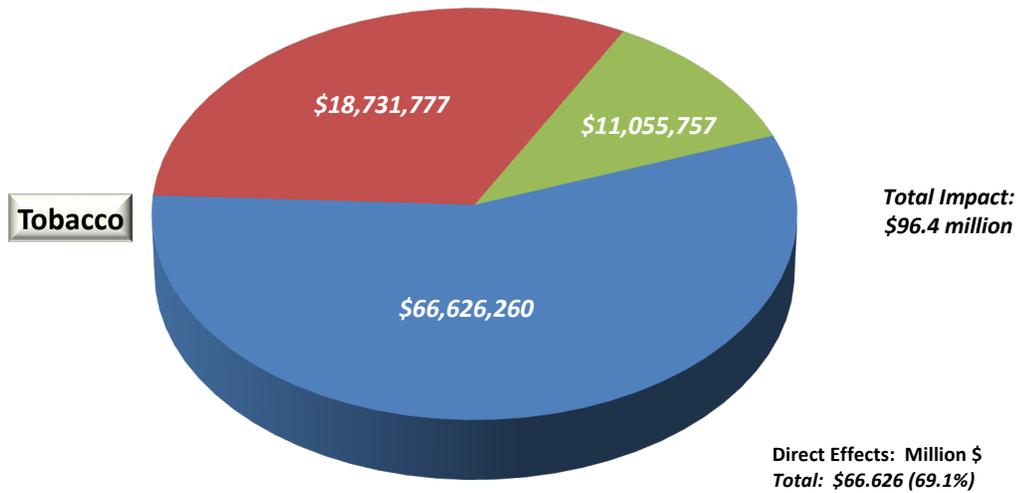
Total: \$18.732 (19.4%)

- Pesticide & Other Agricultural Chemicals: \$4.220
- Wholesale Trade (Nondurable Goods Merchants): \$1.835
- Warehousing & Storage: \$1.256
- Other Real Estate: \$1.233
- Insurance Agents, Brokerages, & Related Activities: \$1.013

Induced Effects: Million \$

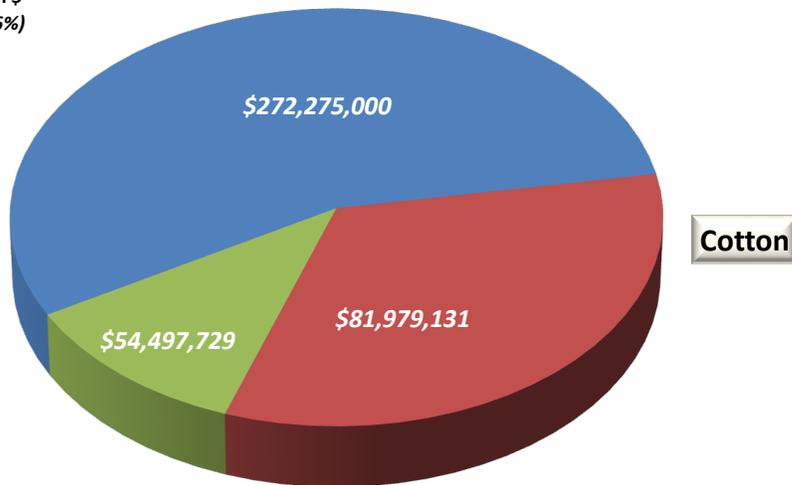
Total: \$11.056 (11.5%)

- Owner-Occupied Dwellings: \$1.289
- Hospitals: \$0.683
- Office of Physicians: \$0.451
- Limited-Service Restaurants: \$0.376
- Full-Service Restaurants: \$0.334



Direct Effects: Million \$
Total: \$272.275 (66.6%)

Total Impact:
\$408.7 million



Induced Effects: Million \$
Total: \$54.498 (13.3%)

- Owner-Occupied Dwellings: \$6.355
- Hospitals: \$3.366
- Office of Physicians: \$2.222
- Limited-Service Restaurants: \$1.853
- Full-Service Restaurants: \$1.647

Indirect Effects: Million \$
Total: \$81.979 (20.1%)

- Wholesale Trade (Nondurable Goods Merchants): \$9.763
- Maintenance & Repair Construction: \$5.852
- Other Real Estate: \$5.636
- Other Local Govt. Enterprises: \$5.575
- Pesticide & Other Agricultural Chemicals: \$5.532

Figure 21. Estimated Direct, Indirect, and Induced Contributions for Tobacco Farming and Cotton Farming

Indirect Effects: Million \$

Total: \$63.790 (24.6%)

Pesticides & Other Agricultural Chemicals: \$10.488
Wholesale Trade (Nondurable Goods Merchants): \$6.374
Insurance Carriers (except Direct Life): \$5.463
Insurance Agents, Brokerages, & Related Activities: \$5.449
Other Local Govt. Enterprises: \$3.323

Induced Effects: Million \$

Total: \$30.253 (11.6%)

Owner-Occupied Dwellings: \$3.528
Hospitals: \$1.869
Office of Physicians: \$1.233
Limited-Service Restaurants: \$1.028
Full-Service Restaurants: \$0.914

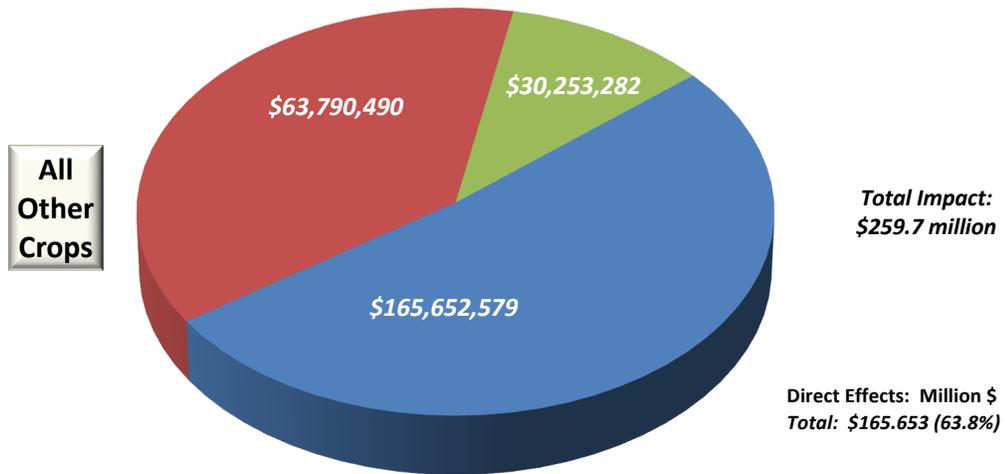


Figure 22. Estimated Direct, Indirect and Induced Contributions for All Other Crop Farming

Indirect Effects: Million \$

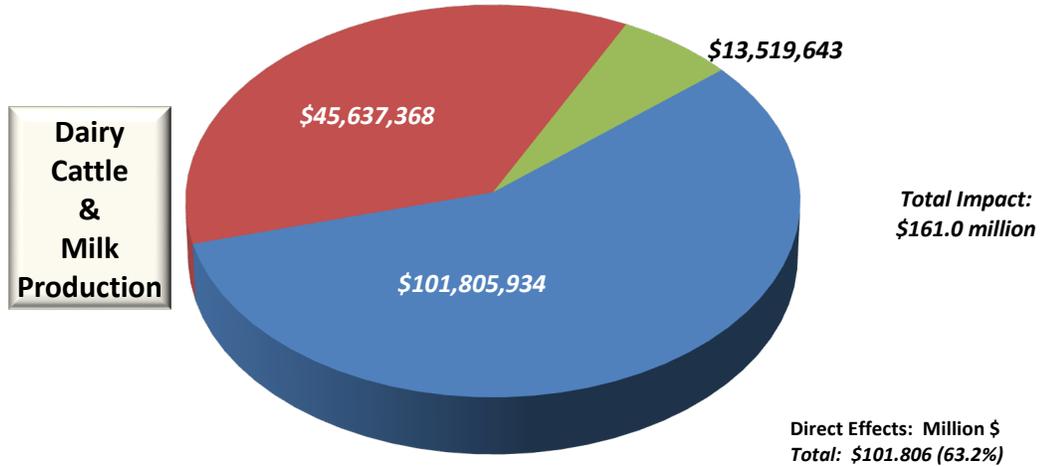
Total: \$45.637 (28.4%)

Wholesale Trade (Nondurable Goods Merchants): \$8.379
 Other Animal Food Manufacturing: \$6.427
 Truck Transportation: \$2.283
 Pesticides & Other Agricultural Chemicals: \$2.142
 Other Real Estate: \$2.024

Induced Effects: Million \$

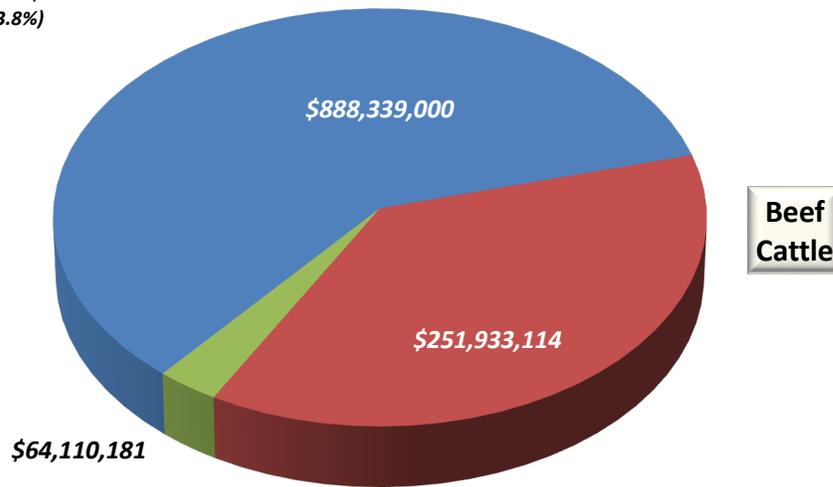
Total: \$13.520 (8.4%)

Owner-Occupied Dwellings: \$1.576
 Hospitals: \$0.835
 Office of Physicians: \$0.551
 Limited-Service Restaurants: \$0.459
 Full-Service Restaurants: \$0.409



Direct Effects: Million \$
Total: \$888.399 (73.8%)

Total Impact:
\$1,204.4 million



Induced Effects: Million \$
Total: \$64.110 (5.3%)

Owner-Occupied Dwellings: \$7.483
 Hospitals: \$3.960
 Office of Physicians: \$2.613
 Limited-Service Restaurants: \$2.176
 Full-Service Restaurants: \$1.939

Indirect Effects: Million \$
Total: \$251.933 (20.9%)

Wholesale Trade (Nondurable Goods Merchants): \$54.063
 Truck Transportation: \$41.832
 Other Animal Food Manufacturing: \$33.959
 Other Real Estate: \$8.484
 Monetary Authorities & Depository Credit Intermediation: \$6.830

Figure 23. Estimated Direct, Indirect, and Induced Contributions for Dairy Cattle & Milk Production and Beef Cattle Farming

Indirect Effects: Million \$

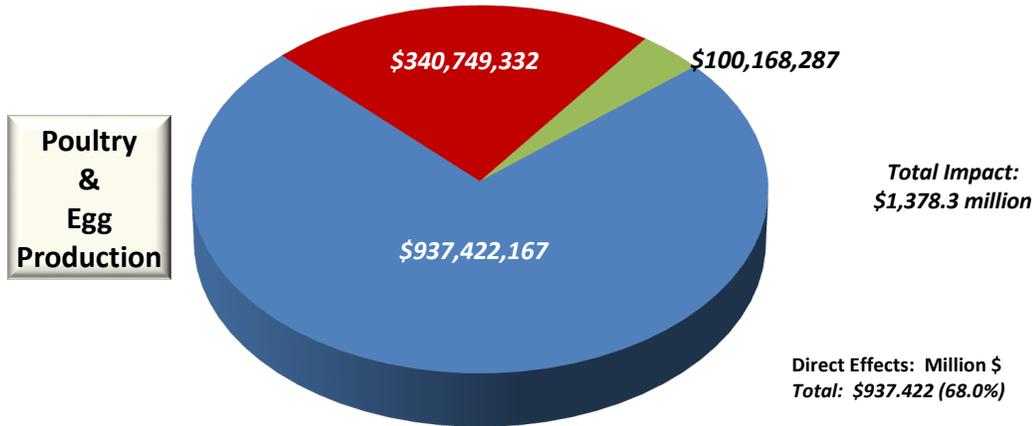
Total: \$340.749 (24.7%)

- Other Animal Food Manufacturing: \$89.017
- Wholesale Trade (Nondurable Goods Merchants): \$79.820
- Truck Transportation: \$26.315
- Wholesale Trade (Grocery & Related Products): \$10.438
- Veterinary Services: \$8.615

Induced Effects: Million \$

Total: \$100.168 (7.3%)

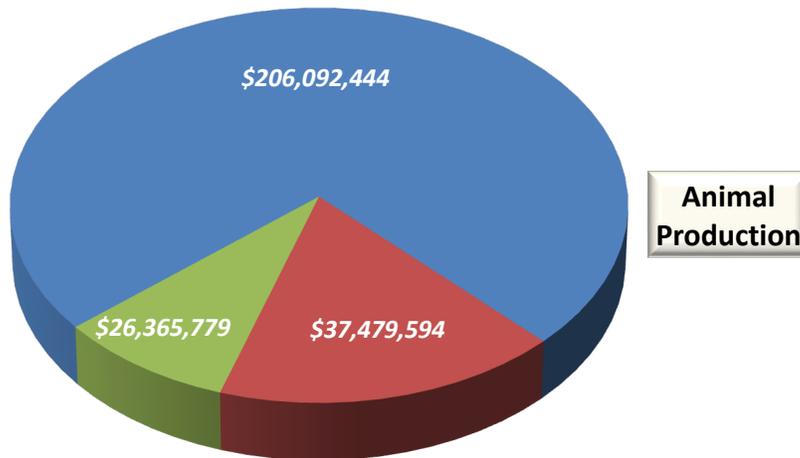
- Owner-Occupied Dwellings: \$11.686
- Hospitals: \$6.187
- Office of Physicians: \$4.083
- Limited-Service Restaurants: \$3.402
- Full-Service Restaurants: \$3.028



Direct Effects: Million \$

Total: \$206.092 (76.3%)

Total Impact: \$269.9 million



Induced Effects: Million \$

Total: \$26.366 (9.8%)

- Owner-Occupied Dwellings: \$3.073
- Hospitals: \$1.629
- Office of Physicians: \$1.075
- Limited-Service Restaurants: \$0.897
- Full-Service Restaurants: \$0.796

Indirect Effects: Million \$

Total: \$37.480 (13.9%)

- Wholesale Trade (Nondurable Goods Merchants): \$5.841
- Other Animal Food Manufacturing: \$5.170
- Truck Transportation: \$3.113
- Insurance Agents, Brokerages, & Related Activities: \$2.161
- Insurance Carriers (except Direct Life): \$1.347

Figure 24. Estimated Direct, Indirect, and Induced Contributions for Poultry & Egg Production and Animal Production, except Cattle, Poultry & Eggs

For secondary agricultural products and for all estimated variables (output, employment, labor income and value added), food manufacturing contributed the greatest total economic impact values (Table 20).

Beverage manufacturing was next except for total value added where tobacco products had the largest value.

Table 20. Estimated Total Economic Contributions from Secondary Agricultural Products, 2023

Sector	TIO ^a	Employment	Labor Income ^b	TVA ^c
	(Million \$)	(Number)	(Million \$)	(Million \$)
Total Secondary Agricultural Products	63,006	198,217	12,062	24,320
Food Manufacturing	47,392	155,882	9,053	17,074
Beverage Manufacturing	6,269	16,949	1,236	2,782
Tobacco Products	5,749	9,083	759	3,041
Textile Mills	1,739	6,192	412	585
Apparel Manufacturing	888	5,720	330	443
Textile Product Mills	791	3,576	220	319
Leather & Allied Product Manufacturing	177	815	52	76

^aTotal Industry Output – annual value of production by industry.

^bLabor Income – employment compensation (wage and salaries plus benefits) and proprietary income (payments received by self-employed individuals and unincorporated business owners).

^cTotal Value Added – income to workers paid by employers; self-employed income; interests, rents, royalties, dividends, and profit payments; and production and import taxes.

Primary and Secondary Forest Products Total Contributions:

Figure 25 shows the estimated direct, indirect and induced impacts for sawmills and commercial logging. The top five indirect and induced sectors based on output value are also listed. Paper mills contributed the largest value for all the indicators analyzed except for employment. Sawmills (Table 21) had the largest number of workers at 7,807.

Table 21. Estimated Total Economic Contributions from Primary Forest Products, 2023

Sector	TIO ^a	Employment	Labor Income ^b	TVA ^c
	(Million \$)	(Number)	(Million \$)	(Million \$)
Total Primary Forest Products	7,377	18,509	1,518	3,494
Paper Mills	2,924	5,821	570	1,534
Sawmills	2,198	7,807	506	884
Paperboard Mills	2,052	4,406	402	987
Wood Preservation	122	266	21	52
Pulp Mills	81	209	19	37

^aTotal Industry Output – annual value of production by industry.

^bLabor Income – employment compensation (wage and salaries plus benefits) and proprietary income (payments received by self-employed individuals and unincorporated business owners).

^cTotal Value Added – income to workers paid by employers; self-employed income; interests, rents, royalties, dividends, and profit payments; and production and import taxes.

Indirect Effects: Million \$

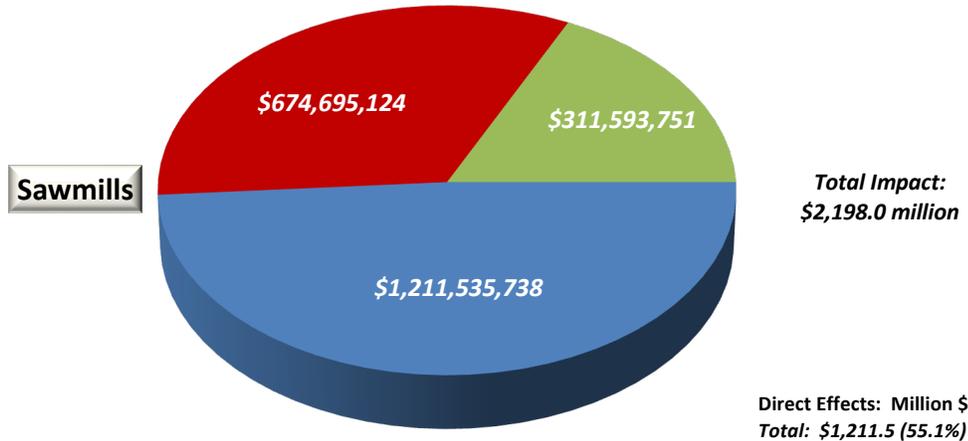
Total: \$674.695 (30.7%)

Wholesale Trade (Nondurable Goods Merchants): \$142.953
 Commercial Logging: \$119.032
 Truck Transportation: \$54.211
 Warehousing & Storage: \$17.913
 Other Real Estate: \$13.814

Induced Effects: Million \$

Total: \$311.594 (14.2%)

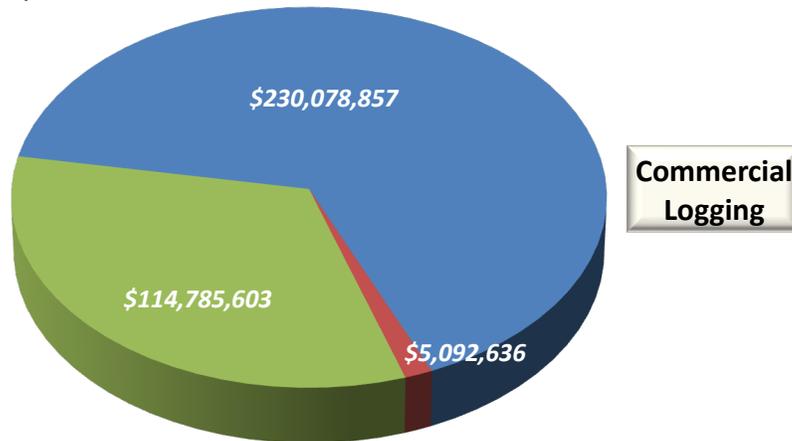
Owner-Occupied Dwellings: \$36.359
 Hospitals: \$19.204
 Offices of Physicians: \$12.669
 Limited-Service Restaurants: \$10.533
 Full-Service Restaurants: \$9.421



Direct Effects: Million \$

Total: \$230.079 (65.7%)

Total Impact:
\$350.0 million



Induced Effects: Million \$

Total: \$114.786 (32.8%)

Owner-Occupied Dwellings: \$13.481
 Hospitals: \$7.067
 Offices of Physicians: \$4.657
 Limited-Service Restaurants: \$3.843
 Full-Service Restaurants: \$3.491

Indirect Effects: Million \$

Total: \$5.093 (1.5%)

Agriculture & Forestry Support Activities: \$2.100
 Wholesale Trade (Nondurable Goods Merchants): \$0.857
 Truck Transportation: \$0.435
 All Other Crop Farming: \$0.214
 Monetary Authorities & Depository Credit Intermediation: \$0.085

Figure 25. Estimated Direct, Indirect and Induced Contributions for Sawmill and Commercial Logging

For all indicators for secondary forest products, paper manufacturing; furniture and related products manufacturing; other wood products manufacturing (e.g., wood containers and pallets; all other miscellaneous wood products, and wood kitchen cabinets and countertops); and wood windows, doors and millwork were the largest contributors (Table 22). Manufactured homes also had large numbers of employees.

Table 22. Estimated Total Economic Contributions from Secondary Forest Products, 2023

Sector	TIO ^a	Employment	Labor Income ^b	TVA ^c
	(Million \$)	(Number)	(Million \$)	(Million \$)
Total Secondary Forest Products	21,160	68,749	5,090	9,069
Paper Manufacturing	10,480	27,015	2,157	4,509
Furniture & Related Products Manufacturing	3,054	13,484	899	1,224
Other Wood Products Manufacturing	2,190	9,496	630	969
Wood Windows & Doors & Millwork	2,057	7,487	535	931
Manufactured Homes Manufacturing	1,926	7,019	549	829
Veneer, Plywood, & Engineered Wood Products Manufacturing	1,453	4,248	319	608

^aTotal Industry Output – annual value of production by industry.

^bLabor Income – employment compensation (wage and salaries plus benefits) and proprietary income (payments received by self-employed individuals and unincorporated business owners).

^cTotal Value Added – income to workers paid by employers; self-employed income; interests, rents, royalties, dividends, and profit payments; and production and import taxes.

The 2023 output and employment multipliers for agricultural commodities and forestry activities ranged from 1.022 to 1.814 for total industrial output and 1.004 to 4.150 for employment (Table 23). For interpretation, if sawmills increased total industry output by \$1 million, the state’s economy would increase by an estimated \$0.814 million overall, and for each job supported in this same industry an estimated 2.190 additional jobs would be supported in other industries. Sawmills that produce \$1 million of total industry output generated an additional \$0.557 million indirectly through the purchase of inputs and \$0.814 million in total economic activity (purchased inputs plus household spending of \$.257 million) within the state.

Table 23. Output and Employment Multipliers for Selected Agriculture and Forestry Sectors, 2023

IMPLAN Sector	TIO ^a		Employment	
	Indirect ^b	Indirect & Induced ^c	Indirect ^b	Indirect & Induced ^c
Oilseed farming	1.231	1.304	1.115	1.171
Grain farming	1.516	1.651	1.183	1.264
Vegetable & melon farming	1.299	1.438	1.059	1.106
Fruit farming	1.291	1.470	1.028	1.057
Tree nut farming	1.079	1.333	1.004 ^d	1.027
Greenhouse, nursery, and floriculture	1.209	1.411	1.053	1.134
Tobacco farming	1.281	1.447	1.125	1.239
Cotton farming	1.301	1.501	1.229	1.462
All other crop farming	1.385	1.568	1.018	1.033
Dairy cattle & milk production	1.448	1.581	1.218	1.325
Beef cattle farming	1.284	1.356	1.032	1.045
Poultry & egg production	1.363	1.470	1.454	1.698

Table 23. Output and Employment Multipliers for Selected Agriculture and Forestry Sectors, 2023

IMPLAN Sector	TIO ^a		Employment	
	Indirect ^b	Indirect & Induced ^c	Indirect ^b	Indirect & Induced ^c
Animal production, except cattle/poultry/eggs	1.182	1.310	1.016	1.034
Commercial hunting & trapping	1.045	1.069	1.026	1.043
Agriculture & forestry support activities	1.039	1.759	1.005	1.143
Commercial logging	1.022 ^d	1.521	1.033	1.268
Sawmills	1.557	1.814 ^d	2.506	3.190
Wood preservation	1.348	1.509	2.452	3.331
Pulp mills	1.411	1.649	2.550	3.652
Paper mills	1.291	1.468	2.435	3.602
Paperboard mills	1.390	1.584	2.879	4.150 ^d
Forestry, forest products, & timber tracts	1.055	1.612	1.118	1.396

^aTotal Industry Output – annual value of production by industry.

^bEconomic effects from business-to-business purchases in the supply chain (Direct + Indirect)/(Direct).

^cIncludes indirect effects plus the economic effects from household spending of labor income (Direct + Indirect + Induced)/(Direct).

^dDenotes the lowest or highest multipliers for total industrial output and employment.

Figures 26 through 31 compare each of Tennessee’s 95 individual county’s direct agriculture and forestry economic activity (no multiplier effects) to that county’s entire economy (all economic activity for the county). These values were based on each individual county’s total industry output for those industries. In this section, “**primary agriculture**” includes crop production and livestock breeding and feeding, whereas “**primary forestry**” includes the management and logging of trees. “**All agriculture**” includes primary agriculture, plus the input supplying industries and agriculture manufacturing. Likewise, “**all forestry**” includes primary forestry, plus input supplying industries and forestry manufacturing. Lake County had the highest level of economic activity for **primary agriculture** at 14.3 percent, followed by Clay County at 10.1 percent (Table 24). For **all agriculture**, Moore County had the highest level at 51.1 percent, followed by Tipton County at 30.4 percent. For **primary forestry**, Wayne County followed by Grundy County had the highest level of economic activity at 1.7 percent and 1.1 percent; for **all forestry**, Hardin County and Grainger County had the highest levels at 22.0 percent and 19.8 percent. Combining both “**primary agriculture**” and “**primary forestry**,” Lake County (14.3 percent for direct) and Moore County (51.2 percent for total) had the highest levels of economic activity.

Table 24. Tennessee Counties with the Highest Proportion of Direct Economic Activity for Agriculture and Forestry, 2023

Rank	Agriculture		Forestry		Combined	
	Primary	All	Primary	All	Primary	All
1 st	Lake (14.3%)	Moore (51.1%)	Wayne (1.7%)	Hardin (22.0%)	Lake (14.3%)	Moore (51.2%)
2 nd	Clay (10.1%)	Tipton (30.3%)	Grundy (1.1%)	Grainger (19.8%)	Hardin (13.1%)	Weakley (31.3%)

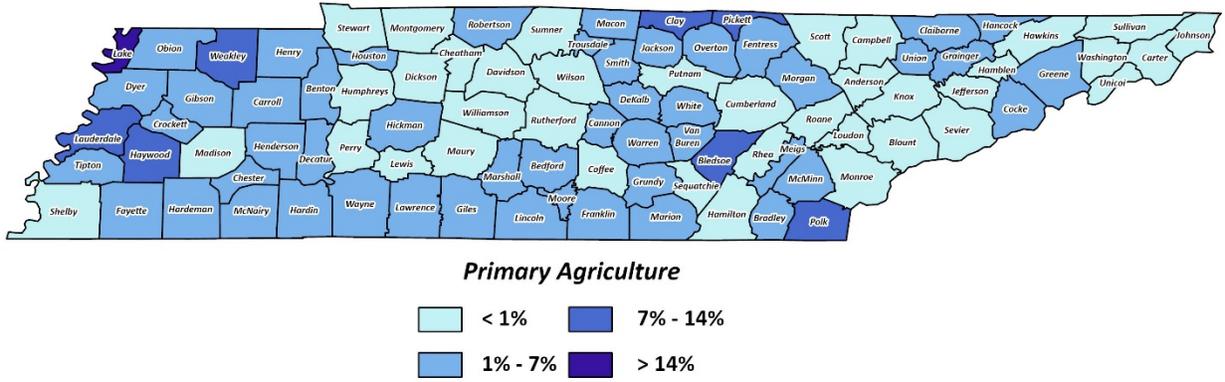


Figure 26. Percent of Direct Economic Activity from Primary Agriculture, 2023
 (Source: IMPLAN Group, LLC, 2023 Data)

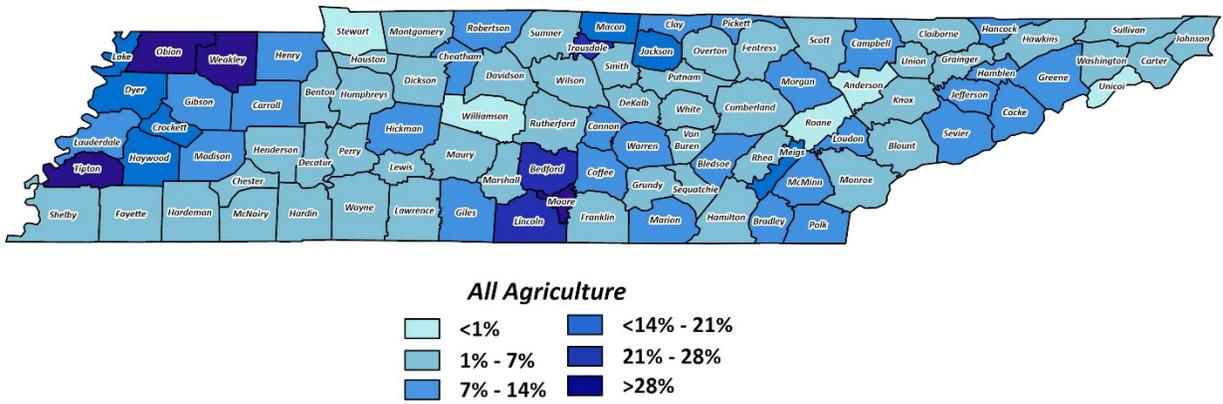


Figure 27. Percent of Direct Economic Activity from All Agriculture, 2023
 (Source: IMPLAN Group, LLC, 2023 Data)

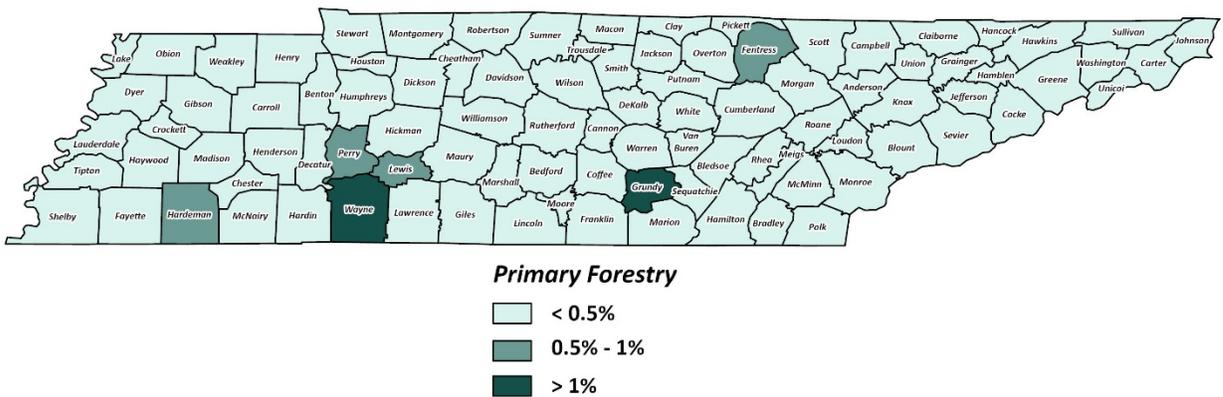


Figure 28. Percent of Direct Economic Activity from Primary Forestry, 2023
 (Source: IMPLAN Group, LLC, 2023 Data)



Total Forestry

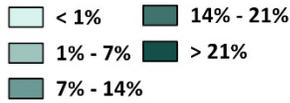


Figure 29. Percent of Direct Economic Activity from All Forestry, 2023
 (Source: IMPLAN Group, LLC, 2023 Data)



Primary Agriculture & Forestry

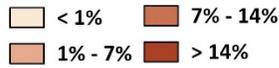
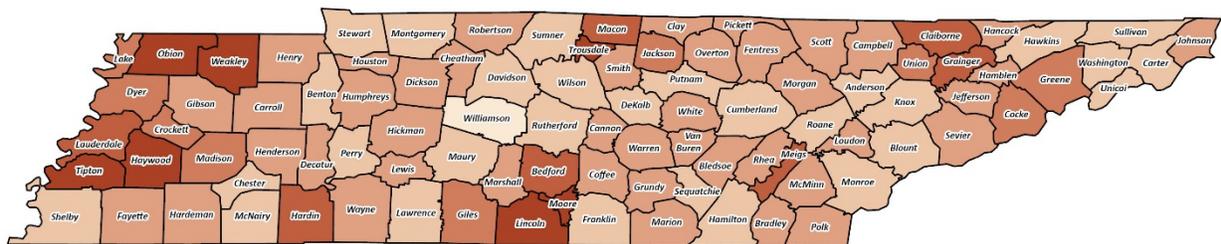


Figure 30. Percent of Direct Economic Activity from Primary Agriculture and Forestry, 2023
 (Source: IMPLAN Group, LLC, 2023 Data)



All Agriculture & Forestry

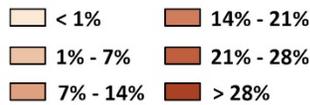


Figure 31. Percent of Direct Economic Activity from All Agriculture and Forestry, 2023
 (Source: IMPLAN Group, LLC, 2023 Data)

Tax Contributions from Tennessee Agriculture and Forestry

Total tax collection revenues for Tennessee in fiscal year 2023 are estimated at close to \$26.7 billion in the form of local and state taxes (TN Department of Revenue, 2025). Based on the IMPLAN data for Tennessee in 2023, tax impacts at the county and state levels as a result of direct and multiplier effects for agriculture and forestry (includes the production and processing of agricultural and forest products and the input suppliers of these products) are estimated at \$846.0 million and \$1.9 billion, respectively (Table 25). An additional \$4.9 billion is generated for the federal government. Agriculture tax revenues are estimated at \$2.7 billion for state/county and \$3.4 billion for federal. Forestry generated \$696.9 million in tax revenues for state/county and \$1.6 billion in federal. For state/county tax revenues, taxes on imports and production for both agriculture and forestry have the largest value; for federal tax revenues, personal (household) taxes have the largest value.

Table 25. Estimated State/Local and Federal Tax Revenues from Tennessee Agriculture and Forestry, 2023

	County	Revenues	
		State	Federal
		(Million \$)	
Agriculture^a			
Production & import taxes ^b	\$638.6	\$1,189.6	\$84.0
Corporate profits taxes ^c	\$0.0	\$248.2	\$558.0
Personal (household) taxes ^d	\$2.0	\$12.4	\$2,720.4
Total	\$640.5	\$1,450.2	\$3,362.4
Forestry^a			
Production & import taxes ^b	\$204.4	\$380.8	\$26.9
Corporate profits taxes ^c	\$0.0	\$104.7	\$235.3
Personal (household) taxes ^d	\$1.0	\$6.0	\$1,318.2
Total	\$205.4	\$491.5	\$1,580.4
Agriculture & Forestry Total	\$845.9	\$1,941.7	\$4,942.8

^aIncludes the production and processing of agricultural or forest products and the input suppliers of these products.

^bFor state/county, sales taxes, property taxes, motor vehicle licenses taxes, severance taxes, other taxes, and special assessments; for federal, excise taxes and custom duty taxes.

^cFor state/county/federal, corporate profit taxes.

^dFor state/county, personal income tax, motor vehicle license tax, other tax (fishing/hunting); for federal, social insurance and personal income taxes.

Source: Clouse, 2022; Minnesota IMPLAN Group, 2023 Data

Summary and Conclusion

The agri-forestry industrial complex included the primary industries typically associated with agriculture and forest operations such as crop production, livestock breeding and feeding, and the management and logging of trees. Also included in the industrial complex are the input supplying industries and value-added subsectors, which included food and beverage manufacturing, apparel and textiles, and forestry products manufacturing. In 2023, the agri-forestry industrial complex directly and indirectly (i.e., including multiplier effects) contributed \$103.8 billion to Tennessee's economy. In terms of gross output this

value was 10.6 percent of the economic activity conducted in the state. An estimated 390,583 individuals work in industries either part of or supported by the complex, or 8.5 percent of total employment in Tennessee.

Agriculture generated \$74.8 billion in output or 7.6 percent of the economic activity in Tennessee and supported 299,180 jobs, with 92,540 (both full- and part-time) jobs in agricultural production. *Forestry* included the management and logging of trees; sawmills (primary forestry products), including pulp and paper mills, plus forestry products manufacturing (secondary forestry products). Forestry accounted for 3.0 percent of the state's economy, supported 91,402 Tennessee jobs, and generated \$29.1 billion in output.

When comparing a county's direct (without multiplier effects) agriculture and forestry economic activity to its total economic activity (all industries) for each of Tennessee's 95 counties, Lake County had the highest share of economic activity for commodity agriculture (crop and livestock breeding and feeding) at 14.3 percent. For all agriculture (includes direct agriculture, plus agricultural input supplying and agriculture-based manufacturing sectors), Moore County had the highest share of economic activity at 51.1 percent. For direct forestry (i.e., the management and logging of forests), Wayne County had the highest level of direct economic activity at 1.7 percent. For all forestry (includes direct forestry, plus input supplying industries and forestry manufacturing), Hardin County had the highest share at 22.02 percent. Combining both agriculture and forestry, Moore and Weakley counties had the largest shares of local economic activity at 51.2 percent and 31.3 percent, respectively.

Comparing 2021 and 2023 statewide agricultural data, many of the traditional row crops grown in the state experienced decreased harvested acreage except for wheat, soybeans, and hay. Crop prices only increased for hay and tobacco. For livestock inventory, the numbers of chickens (excluding broilers), hogs and eggs increased, while the number of beef cattle and calves, milk cows, along with broilers, decreased. Prices increased for all livestock products with the largest increase for broilers, followed closely by beef cattle and calves.

Comparing 2023 major industry sectors to previous studies using 2006, 2009, 2011, 2013, 2015, 2017, 2019 and 2021 IMPLAN data, the value of direct economic activity for agriculture and forestry increased an average of 7.0 percent and 2.7 percent, respectively. Most other major industrial sectors had increases in economic activity for this timeframe with services having the largest average increase at 15.3 percent, followed by wholesale trade (13.3 percent); mining (12.8 percent); construction (12.0 percent); government (10.6 percent); finance, insurance and real estate combined (10.2 percent); retail trade (8.2 percent); and manufacturing (5.2 percent). For workers or jobs in agriculture and forestry, forestry had the largest average decrease at 4.3 percent with agriculture having a 0.9 percent decrease. For workers or jobs in other industries, the largest average increase was for mining at 6.0 percent, followed by services (5.6 percent), construction (3.8

percent) and government (2.1 percent). The largest average decrease was for manufacturing at 0.4 percent, followed by retail trade at 0.2 percent.

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Appendix A: IMPLAN Methodology

The Tennessee Agri-Industry Model (TN-AIM) is based on the Impact Analysis for Planning (IMPLAN) model and its databases (IMPLAN Group LLC, 2023). Beginning with this report and subsequent reports, IMPLAN's Cloud platform (Release 25.1) is used. IMPLAN's Cloud platform offers an industry contribution analyses option for IMPLAN modelers, which was used to estimate Tennessee's agri-forestry industrial complex economic contributions to the state for this analysis. IMPLAN uses a National Trade Flows Model (NTFM) (doubly-constrained gravity model) to estimate a new set of regional purchase coefficients and other trade data that estimates local purchases based on a region's characteristics (Thorvaldson, 2018). Not only does the model describe a regional economy, but it can also be used for predictive purposes by providing multiplier-based estimates.

Multipliers measure the response of the economy to a change in production or demand. Multiplier analysis generally focuses on the impacts of exogenous changes on: a) output of the sectors in the economy, b) resulting changes in income earned by households and c) resulting change in employment (in physical terms) that is expected to be generated. The concept of multipliers rests on the difference between the initial impact of an exogenous change (final demand) and the total impacts of a change. **Direct** impacts measure the response of a given industry given a change in final demand for that same industry. **Indirect** impacts represent the response by all local industries that occur as a result of a change in final demand for a specific industry. **Induced** impacts represent the response by all local industries caused by increased (decreased) expenditures of new household income and inter-institutional transfers generated (lost) from the direct and indirect impacts of the change in final demand for a specific industry.

This study uses Type I and Type SAM (Social Accounting Matrix) multipliers. Type I multipliers, used to estimate the indirect impacts, are calculated by dividing direct plus indirect impacts by the direct impacts. Type SAM multipliers are used to estimate the induced impacts and are calculated as (direct + indirect + induced impacts)/direct impacts. As argued by the current developers of IMPLAN, the Type SAM multipliers consider the expenditures resulting from increased incomes of households as well as inter-institutional transfers resulting from the economic activity. Therefore, Type SAM multipliers assume that as final demand changes, incomes also increase. As consumers and institutions increase expenditures this leads to increased demands from local industries. To prevent double-counting the economic contributions estimated, regional purchase coefficients¹⁴ (RPC) are set to zero for the backward linked supply and service industries.¹⁵

¹⁴IMPLAN's regional purchase coefficient (RPC) represents how much of each commodity purchasing industries and institutions buy from regional sources. For example, a RPC of .55 for a given commodity means that for each \$1 of local need, 55 percent of the commodity is purchased locally.

¹⁵Hence, the analysis provided in this document belongs in the category of contribution analysis. For more details, see Steinback, 2004.

Input-output model results from previous studies in this series were based on the Standard Industrial Classification (SIC) system as defined by the United States Census Bureau. Beginning in 2006, results are based on the North American Industrial Classification System (NAICS) (Census NAICS, 2002, 2007, 2012, 2017 and 2022) (see Table B.1. for 2022). The reader should not compare industry sector level results from the previous studies using the SIC system with the results from this most recent study using NAICS. For readers who are interested in time series data, this creates a problem since many industries are grouped into different or entirely new categories. Plus, changes in input-output modeling and data sources are additional reasons the reader should be wary with respect to evaluating changes in impacts over time.

IMPLAN uses a macro-regional social accounting system and generates a set of balanced economic/social accounts and multipliers.¹⁶ The social accounting system is an extension of input-output (I-O) analysis.¹⁷ Input-output analysis can provide important and timely information on the interrelationships in a regional economy and the impacts of changes on that economy. Input-output analysis has been expanded beyond market-based transaction accounting to include non-market financial flows by using a social accounting matrix or SAM framework (Pyatt and Round, 1985). The model describes the transfer of money between industries and institutions and contains both market-based transactions and non-market financial flows, such as inter-institutional transfers (see Figure A.1). The ‘Make’ and ‘Use’ components of the SAM include the commodities made and used by industries. Factors represent the value-added by industries, including wages and compensation to workers, interest, profits and indirect business taxes. Capital includes expenditures made by industries and institutions to obtain equipment and construction. The SAM takes into account corporate profits as “Enterprises.” The SAM also accounts for non-industrial financial flows, including factor exports and imports, institution exports, factor distribution and inter-institutional transfers. Factor exports include payments reimbursed from outside the region for exports less the payments for imports. Institutional exports would include situations such as jobs commuting outside the region. Factor distributions are payments from the factor sectors to institutions, such as households or governments. Inter-institutional transfers include payments between institutions, such as federal government grants to state governments, welfare, social security payments, and taxes paid to governments.

The reader should note that I-O modeling typically have the following assumptions: **1)** constant returns to scale (i.e., regardless of the level of production, the same quantity of inputs is needed per unit of output), **2)** no substitution effects (i.e., the same mix of inputs is always used to create the output unless production

¹⁶While IMPLAN provides a macro-based SAM it does not account for income distribution by functional class as would a SAM defined traditionally in the approach laid out by Stone (1961).

¹⁷Input-output (I-O) analysis, also known as inter-industry analysis, is the name given to an analytical work conducted by Wassily Leontief (1936) in the late 1930’s. The fundamental purpose of the I-O framework is to analyze the interdependence of industries in an economy through market-based transactions.

function changes are made), **3)** industry homogeneity (i.e., firms within an industry have the same common production process), **4)** no supply constraints (i.e., no restrictions to inputs, raw materials and employment), **5)** same technology (i.e., an industry and its commodity production uses the same technology to produce its products), **6)** constant byproducts (i.e., an industries byproducts are constant); **7)** the model is static (i.e., no general equilibrium effects – consumer preferences, government policy, technology and prices remain constant), **8)** backward linkages (i.e., no upstream effects – an industries production is not looked forward to consider how their output is used as an input for other production), and **9)** time (i.e., time is not considered in I-O modeling; the time it takes for an economy to settle at a new equilibrium after a change is not included) (Slovachek, 2023).

	Industry	Commodity	Factors	Institutions	Enterprises	Capital	Trade	Total
Industry		<i>Make</i>					<i>Exports</i>	Total Industry Income
Commodity	<i>Use</i>			<i>Consumption</i>		<i>Consumption</i>		Total Commodity Income
Factors	<i>Value Added</i>						<i>Exports</i>	Total Factor Income
Institutions		<i>Sales</i>	<i>Transfers</i>	<i>Transfers</i>	<i>Transfers</i>		<i>Exports</i>	Total Institutional Income
Enterprises								Total Enterprise Income
Capital						<i>Transfers</i>	<i>Exports</i>	Total Capital Income
Trade	<i>Imports</i>		<i>Factor Trade</i>	<i>Imports</i>		<i>Transfers</i>	<i>Exports</i>	Total Trade Income
Total	Total Industry Outlay	Total Commodity Outlay	Total Factor Outlay	Total Institution Outlay	Total Enterprise Outlay	Total Capital Outlay	Total Trade Exports	

Figure A.1. Social Accounting Matrix Framework

Source: Olson and Lindall, 1999

**Appendix B: IMPLAN/NAICS Sector Bridge with Agri-Forestry Industrial Complex
Identification**

Table B.1. IMPLAN 528 Industry Sector Descriptions, NAICS and Agri-Forestry Aggregation Designation

Sector	Description	2022 NAICS	Agri-Forestry ^a
1	Oilseed farming	111110, 111120, 111191	Primary Ag
2	Grain farming	111130, 111140, 111150, 111160, 111191, 111199	Primary Ag
3	Vegetable & melon farming	111211, 111219	Primary Ag
4	Fruit farming	111310, 111320, 111331, 111332, 111333, 111334, 111336, 111339	Primary Ag
5	Tree nut farming	111335, 111336	Primary Ag
6	Greenhouse, nursery, & floriculture production	111411, 111419, 111421, 111422	Primary Ag
7	Tobacco farming	111910	Primary Ag
8	Cotton farming	111920	Primary Ag
9	Sugarcane & sugar beet farming	111930, 111991	Primary Ag
10	All other crop farming	111940, 111992, 111998	Primary Ag
11	Beef cattle ranching & farming, including feedlots & dual-purpose ranching & farming	112111, 112112	Primary Ag
12	Dairy cattle & milk production	112120	Primary Ag
13	Poultry & egg production	112310, 112320, 112330, 112340, 112390	Primary Ag
14	Animal production, except cattle & poultry & eggs	112210, 112410, 112420, 112511, 112512, 112519, 112910, 112920, 112930, 112990	Primary Ag
15	Forestry, forest products, & timber tract production	113110, 113210	For Inputs
16	Commercial logging	113310	For Inputs
17	Commercial fishing	114111, 114112, 114119	Primary Ag
18	Commercial hunting & trapping	114210	Primary Ag
19	Support activities for agriculture & forestry	115111, 115112, 115113, 115114, 115115, 115116, 115210, 115310	Primary Ag
20	Oil and gas extraction	211120, 211130	Mining
21	Coal mining	212114, 212115	Mining
22	Copper, nickel, lead, and zinc mining	212230	Mining
23	Iron ore mining	212210	Mining
24	Gold ore and silver ore mining	212220	Mining
25	Other metal ore mining	212290	Mining
26	Stone mining and quarrying	212311, 212312, 212313, 212319	Mining
27	Sand and gravel mining	212321, 212322, 212323	Mining
28	Other clay, ceramic, refractory minerals mining	212323	Mining
29	Other nonmetallic mineral mining and quarrying	212390	Mining
30	Drilling oil and gas wells	213111	Mining
31	Support activities for oil and gas operations	213112	Mining
32	Metal mining services	213114	Services
33	Other nonmetallic minerals services	213113, 213115	Services
34	Electric power generation - Hydroelectric	221111	Utilities
35	Electric power generation - Fossil fuel	221112	Utilities
36	Electric power generation - Nuclear	221113	Utilities
37	Electric power generation - Solar	221114	Utilities
38	Electric power generation - Wind	221115	Utilities
39	Electric power generation - Geothermal	221116	Utilities
40	Electric power generation - Biomass	221117	Utilities
41	Electric power generation - All other	221118	Utilities
42	Electric power transmission and distribution	221121, 221122	Utilities
43	Natural gas distribution	221210	Utilities
44	Water, sewage and other systems	221310, 221320, 221330	Utilities
45	Construction of new health care structures	23	Construction
46	Construction of new manuf structures	23	Construction
47	Construction of new power and communication structures	23	Construction

Table B.1. IMPLAN 528 Industry Sector Descriptions, NAICS and Agri-Forestry Aggregation Designation

Sector	Description	2022 NAICS	Agri-Forestry ^a
48	Construction of new educational and vocational structures	23	Construction
49	Construction of new highways and streets	23	Construction
50	Construction of new commercial structures, including farm structures	23	Construction
51	Construction of other new nonresidential structures	23	Construction
52	Construction of new single-family residential structures	23	Construction
53	Construction of new multifamily residential structures	23	Construction
54	Construction of other new residential structures	23	Construction
55	Maintenance and repair construction of nonresidential structures	23	Construction
56	Maintenance and repair construction of residential structures	23	Construction
57	Maintenance and repair construction of highways, streets, bridges, and tunnels	23	Construction
58	Dog and cat food manuf	311111	Secondary Ag
59	Other animal food manuf	311119	Secondary Ag
60	Flour milling	311211	Secondary Ag
61	Rice milling	311212	Secondary Ag
62	Malt manuf	311213	Secondary Ag
63	Wet corn milling	311221	Secondary Ag
64	Soybean and other oilseed processing	311224	Secondary Ag
65	Fats and oils refining and blending	311225	Secondary Ag
66	Breakfast cereal manuf	311230	Secondary Ag
67	Beet sugar manuf	311313	Secondary Ag
68	Sugar cane mills and refining	311314	Secondary Ag
69	Nonchocolate confectionery manuf	311340	Secondary Ag
70	Chocolate and confectionery manuf from cacao beans	311351	Secondary Ag
71	Confectionery manuf from purchased chocolate	311352	Secondary Ag
72	Frozen fruits, juices and vegetables manuf	311411	Secondary Ag
73	Frozen specialties manuf	311412	Secondary Ag
74	Canned fruits and vegetables manuf	311421	Secondary Ag
75	Canned specialties	311422	Secondary Ag
76	Dehydrated food products manuf	311423	Secondary Ag
77	Cheese manuf	311513	Secondary Ag
78	Dry, condensed, and evaporated dairy product manuf	311514	Secondary Ag
79	Fluid milk manuf	311511	Secondary Ag
80	Creamery butter manuf	311512	Secondary Ag
81	Ice cream and frozen dessert manuf	311520	Secondary Ag
82	Frozen cakes and other pastries manuf	311813	Secondary Ag
83	Poultry processing	311615	Secondary Ag
84	Animal, except poultry, slaughtering	311611	Secondary Ag
85	Meat processed from carcasses	311612	Secondary Ag
86	Rendering and meat byproduct processing	311613	Secondary Ag
87	Seafood product preparation and packaging	311710	Secondary Ag
88	Bread and bakery product, except frozen, manuf	311811, 311812	Secondary Ag
89	Cookie and cracker manuf	311821	Secondary Ag
90	Dry pasta, mixes, and dough manuf	311824	Secondary Ag
91	Tortilla manuf	311830	Secondary Ag

Table B.1. IMPLAN 528 Industry Sector Descriptions, NAICS and Agri-Forestry Aggregation Designation

Sector	Description	2022 NAICS	Agri-Forestry ^a
92	Roasted nuts and peanut butter manuf	311911	Secondary Ag
93	Other snack food manuf	311919	Secondary Ag
94	Coffee and tea manuf	311920	Secondary Ag
95	Flavoring syrup and concentrate manuf	311930	Secondary Ag
96	Mayonnaise, dressing, and sauce manuf	311941	Secondary Ag
97	Spice and extract manuf	311942	Secondary Ag
98	All other food manuf	311991, 311999	Secondary Ag
99	Bottled and canned soft drinks & water	312111, 312112	Secondary Ag
100	Manufactured ice	312113	Manuf
101	Breweries	312120	Secondary Ag
102	Wineries	312130	Secondary Ag
103	Distilleries	312140	Secondary Ag
104	Tobacco manuf	312230	Secondary Ag
105	Fiber, yarn, and thread mills	313110	Secondary Ag
106	Broadwoven fabric mills	313210	Secondary Ag
107	Narrow fabric mills and schiffli machine embroidery	313220	Secondary Ag
108	Nonwoven fabric mills	313230	Secondary Ag
109	Knit fabric mills	313240	Secondary Ag
110	Textile and fabric finishing mills	313310	Secondary Ag
111	Fabric coating mills	313320	Secondary Ag
112	Carpet and rug mills	314110	Secondary Ag
113	Curtain and linen mills	314120	Secondary Ag
114	Textile bag and canvas mills	314910	Secondary Ag
115	Rope, cordage, twine, tire cord and tire fabric mills	314994	Secondary Ag
116	Other textile product mills	314999	Secondary Ag
117	Apparel knitting mills	315120	Secondary Ag
118	Cut and sew apparel contractors	315210	Secondary Ag
119	Cut and sew apparel manuf (except contractors)	315250	Secondary Ag
120	Apparel accessories and other apparel manuf	315990	Secondary Ag
121	Leather and hide tanning and finishing	316110	Secondary Ag
122	Footwear manuf	316210	Secondary Ag
123	Other leather and allied product manuf	316990	Secondary Ag
124	Sawmills	321113	Primary For
125	Wood preservation	321114	Primary For
126	Veneer and plywood manuf	321211, 321212	Secondary For
127	Engineered wood member and truss manuf	321215	Secondary For
128	Reconstituted wood product manuf	321219	Secondary For
129	Wood windows and door manuf	321911	Secondary For
130	Cut stock, resawing lumber, and planing	321912	Secondary For
131	Other millwork, including flooring	321918	Secondary For
132	Wood container and pallet manuf	321920	Secondary For
133	Manufactured home (mobile home) manuf	321991	Secondary For
134	Prefabricated wood building manuf	321992	Secondary For
135	All other miscellaneous wood product manuf	321999	Secondary For
136	Pulp mills	322110	Primary For
137	Paper mills	322120	Primary For
138	Paperboard mills	322130	Primary For
139	Paperboard container manuf	322211, 322212, 322219	Secondary For
140	Paper bag and coated and treated paper manuf	322220	Secondary For
141	Stationery product manuf	322230	Secondary For
142	Sanitary paper product manuf	322291	Secondary For
143	All other converted paper product manuf	322299	Secondary For

Table B.1. IMPLAN 528 Industry Sector Descriptions, NAICS and Agri-Forestry Aggregation Designation

Sector	Description	2022 NAICS	Agri-Forestry ^a
144	Printing	323111, 323113, 323117	Manuf
145	Support activities for printing	323120	Manuf
146	Petroleum refineries	324110	Manuf
147	Asphalt paving mixture and block manuf	324121	Manuf
148	Asphalt shingle and coating materials manuf	324122	Manuf
149	Petroleum lubricating oil and grease manuf	324191	Manuf
150	All other petroleum and coal products manuf	324199	Manuf
151	Petrochemical manuf	325110	Manuf
152	Industrial gas manuf	325120	Manuf
153	Synthetic dye and pigment manuf	325130	Manuf
154	Other basic inorganic chemical manuf	325180	Manuf
155	Other basic organic chemical manuf	325193, 325194, 325199	Manuf
156	Plastics material and resin manuf	325211	Manuf
157	Synthetic rubber manuf	325212	Manuf
158	Artificial and synthetic fibers and filaments manuf	325220	Manuf
159	Nitrogenous fertilizer manuf	325311	Ag Inputs
160	Phosphatic fertilizer manuf	325312	Ag Inputs
161	Fertilizer mixing	325314, 325315	Ag Inputs
162	Pesticide and other agricultural chemical manuf	325320	Ag Inputs
163	Medicinal and botanical manuf	325411	Manuf
164	Pharmaceutical preparation manuf	325412	Manuf
165	In-vitro diagnostic substance manuf	325413	Manuf
166	Biological product (except diagnostic) manuf	325414	Manuf
167	Paint and coating manuf	325510	Manuf
168	Adhesive manuf	325520	Manuf
169	Soap and other detergent manuf	325611	Manuf
170	Polish and other sanitation good manuf	325612	Manuf
171	Surface active agent manuf	325613	Manuf
172	Toilet preparation manuf	325620	Manuf
173	Printing ink manuf	325910	Manuf
174	Explosives manuf	325920	Manuf
175	Custom compounding of purchased resins	325991	Manuf
176	Photographic film and chemical manuf	325992	Manuf
177	Other miscellaneous chemical product manuf	325998	Manuf
178	Plastics packaging materials and unlaminated film and sheet manuf	326111, 326112, 326113	Manuf
179	Unlaminated plastics profile shape manuf	326121	Manuf
180	Plastics pipe and pipe fitting manuf	326122	Manuf
181	Laminated plastics plate, sheet (except packaging), and shape manuf	326130	Manuf
182	Polystyrene foam product manuf	326140	Manuf
183	Urethane and other foam product (except polystyrene) manuf	326150	Manuf
184	Plastics bottle manuf	326160	Manuf
185	Other plastics product manuf	326191, 326199	Manuf
186	Tire manuf	326211, 326212	Manuf
187	Rubber and plastics hoses and belting manuf	326220	Manuf
188	Other rubber product manuf	326291, 326299	Manuf
189	Pottery, ceramics, and plumbing fixture manuf	327110	Manuf
190	Brick, tile, and other structural clay product manuf	327120	Manuf
191	Flat glass manuf	327211	Manuf
192	Other pressed and blown glass and glassware manuf	327212	Manuf

Table B.1. IMPLAN 528 Industry Sector Descriptions, NAICS and Agri-Forestry Aggregation Designation

Sector	Description	2022 NAICS	Agri-Forestry ^a
193	Glass container manuf	327213	Manuf
194	Glass product manuf made of purchased glass	327215	Manuf
195	Cement manuf	327310	Manuf
196	Ready-mix concrete manuf	327320	Manuf
197	Concrete block and brick manuf	327331	Manuf
198	Concrete pipe manuf	327332	Manuf
199	Other concrete product manuf	327390	Manuf
200	Lime manuf	327410	Ag Inputs
201	Gypsum product manuf	327420	Manuf
202	Abrasive product manuf	327910	Manuf
203	Cut stone and stone product manuf	327991	Manuf
204	Ground or treated mineral and earth manuf	327992	Manuf
205	Mineral wool manuf	327993	Manuf
206	Miscellaneous nonmetallic mineral products manuf	327999	Manuf
207	Iron and steel mills and ferroalloy manuf	331110	Manuf
208	Iron, steel pipe and tube manuf from purchased steel	331210	Manuf
209	Rolled steel shape manuf	331221	Manuf
210	Steel wire drawing	331222	Manuf
211	Alumina refining and primary aluminum production	331313	Manuf
212	Secondary smelting and alloying of aluminum	331314	Manuf
213	Aluminum sheet, plate, and foil manuf	331315	Manuf
214	Other aluminum rolling, drawing and extruding	331318	Manuf
215	Nonferrous metal (exc aluminum) smelting and refining	331410	Manuf
216	Copper rolling, drawing, extruding and alloying	331420	Manuf
217	Nonferrous metal, except copper and aluminum, shaping	331491	Manuf
218	Secondary processing of other nonferrous metals	331492	Manuf
219	Ferrous metal foundries	331511, 331512, 331513	Manuf
220	Nonferrous metal foundries	331523, 331524, 331529	Manuf
221	Custom roll forming	332114	Manuf
222	Metal crown, closure, and other metal stamping (except automotive)	332119	Manuf
223	Iron and steel forging	332111, 332117	Manuf
224	Nonferrous forging	332112, 332117	Manuf
225	Cutlery, utensil, pot, and pan manuf	332215	Manuf
226	Handtool manuf	332216	Manuf
227	Prefabricated metal buildings and components manuf	332311	Manuf
228	Fabricated structural metal manuf	332312	Manuf
229	Plate work manuf	332313	Manuf
230	Metal window and door manuf	332321	Manuf
231	Sheet metal work manuf	332322	Manuf
232	Ornamental and architectural metal work manuf	332323	Manuf
233	Power boiler and heat exchanger manuf	332410	Manuf
234	Metal tank (heavy gauge) manuf	332420	Manuf
235	Metal cans manuf	332431	Manuf
236	Metal barrels, drums and pails manuf	332439	Manuf
237	Hardware manuf	332510	Manuf
238	Spring and wire product manuf	332613, 332618	Manuf
239	Machine shops	332710	Manuf

Table B.1. IMPLAN 528 Industry Sector Descriptions, NAICS and Agri-Forestry Aggregation Designation

Sector	Description	2022 NAICS	Agri-Forestry ^a
240	Turned product and screw, nut, and bolt manuf	332721, 332722	Manuf
241	Metal heat treating	332811	Manuf
242	Metal coating and nonprecious engraving	332812	Manuf
243	Electroplating, anodizing, and coloring metal	332813	Manuf
244	Valve and fittings, other than plumbing, manuf	332911, 332912, 332919	Manuf
245	Plumbing fixture fitting and trim manuf	332913	Manuf
246	Ball and roller bearing manuf	332991	Manuf
247	Small arms ammunition manuf	332992	Manuf
248	Ammunition, except for small arms, manuf	332993	Manuf
249	Small arms, ordnance, and accessories manuf	332994	Manuf
250	Fabricated pipe and pipe fitting manuf	332996	Manuf
251	Other fabricated metal manuf	332999	Manuf
252	Farm machinery and equipment manuf	333111	Ag Inputs
253	Lawn and garden equipment manuf	333112	Ag Inputs
254	Construction machinery manuf	333120	Manuf
255	Mining machinery and equipment manuf	333131	Manuf
256	Oil and gas field machinery and equipment manuf	333132	Manuf
257	Semiconductor machinery manuf	333242	Manuf
258	Food product machinery manuf	333241	Manuf
259	Sawmill, woodworking, and paper machinery	333243	Pri For
260	All other industrial machinery manuf	333248	Manuf
261	Commercial and service industry machinery manuf	333310	Manuf
262	Industrial and commercial fan and blower and air purification equipment manuf	333413	Manuf
263	Heating equipment (except warm air furnaces) manuf	333414	Manuf
264	Air conditioning, refrigeration, and warm air heating equipment manuf	333415	Manuf
265	Industrial mold manuf	333511	Manuf
266	Special tool, die, jig, and fixture manuf	333514	Manuf
267	Cutting tool and machine tool accessory manuf	333515	Manuf
268	Machine tool manuf	333517	Manuf
269	Rolling mill and other metalworking machinery manuf	333519	Manuf
270	Turbine and turbine generator set units manuf	333611	Manuf
271	Speed changer, industrial high-speed drive, and gear manuf	333612	Manuf
272	Mechanical power transmission equipment manuf	333613	Manuf
273	Other engine equipment manuf	333618	Manuf
274	Measuring, dispensing, and other pumping equipment manuf	333914	Manuf
275	Air and gas compressor manuf	333912	Manuf
276	Elevator and moving stairway manuf	333921	Manuf
277	Conveyor and conveying equipment manuf	333922	Manuf
278	Overhead cranes, hoists, and monorail systems manuf	333923	Manuf
279	Industrial truck, trailer, and stacker manuf	333924	Manuf
280	Power-driven handtool manuf	333991	Manuf
281	Welding and soldering equipment manuf	333992	Manuf
282	Packaging machinery manuf	333993	Manuf
283	Industrial process furnace and oven manuf	333994	Manuf
284	Fluid power cylinder and actuator manuf	333995	Manuf
285	Fluid power pump and motor manuf	333996	Manuf

Table B.1. IMPLAN 528 Industry Sector Descriptions, NAICS and Agri-Forestry Aggregation Designation

Sector	Description	2022 NAICS	Agri-Forestry ^a
286	Scales, balances, and miscellaneous general purpose machinery manuf	333998	Manuf
287	Electronic computer manuf	334111	Manuf
288	Computer storage device manuf	334112	Manuf
289	Computer terminals and other computer peripheral equipment manuf	334118	Manuf
290	Telephone apparatus manuf	334210	Manuf
291	Broadcast and wireless communications equipment manuf	334220	Manuf
292	Other communications equipment manuf	334290	Manuf
293	Audio and video equipment manuf	334310	Manuf
294	Printed circuit assembly (electronic assembly) manuf	334418	Manuf
295	Bare printed circuit board manuf	334412	Manuf
296	Semiconductor and related device manuf	334413	Manuf
297	Capacitor, resistor, coil, transformer, and other inductor manuf	334416	Manuf
298	Electronic connector manuf	334417	Manuf
299	Other electronic component manuf	334419	Manuf
300	Electromedical and electrotherapeutic apparatus manuf	334510	Manuf
301	Search, detection, and navigation instruments manuf	334511	Manuf
302	Automatic environmental control manuf	334512	Manuf
303	Industrial process variable instruments manuf	334513	Manuf
304	Totalizing fluid meter and counting device manuf	334514	Manuf
305	Electricity and signal testing instruments manuf	334515	Manuf
306	Analytical laboratory instrument manuf	334516	Manuf
307	Irradiation apparatus manuf	334517	Manuf
308	Watch, clock, and other measuring and controlling device manuf	334519	Manuf
309	Manuf and reproducing magnetic and optical media	334610	Manuf
310	Electric lamp bulb and part manuf	335139	Manuf
311	Lighting fixture manuf	335131, 335132, 335139	Manuf
312	Small electrical appliance manuf	335210	Manuf
313	Major household appliance manuf	335220	Manuf
314	Power, distribution, and specialty transformer manuf	335311	Manuf
315	Motor and generator manuf	335312	Manuf
316	Switchgear and switchboard apparatus manuf	335313	Manuf
317	Relay and industrial control manuf	335314	Manuf
318	Battery manuf	335910	Manuf
319	Fiber optic cable manuf	335921	Manuf
320	Other communication and energy wire manuf	335929	Manuf
321	Wiring device manuf	335931, 335932	Manuf
322	Carbon and graphite product manuf	335991	Manuf
323	All other miscellaneous electrical equipment and component manuf	335999	Manuf
324	Automobile and light duty motor vehicle manuf	336110	Manuf
325	Heavy duty truck manuf	336120	Manuf
326	Motor vehicle body manuf	336211	Manuf
327	Truck trailer manuf	336212	Manuf

Table B.1. IMPLAN 528 Industry Sector Descriptions, NAICS and Agri-Forestry Aggregation Designation

Sector	Description	2022 NAICS	Agri-Forestry ^a
328	Motor home manuf	336213	Manuf
329	Travel trailer and camper manuf	336214	Manuf
330	Motor vehicle gasoline engine and engine parts manuf	336310	Manuf
331	Motor vehicle electrical and electronic equipment manuf	336320	Manuf
332	Motor vehicle transmission and power train parts manuf	336350	Manuf
333	Motor vehicle seating and interior trim manuf	336360	Manuf
334	Motor vehicle metal stamping	336370	Manuf
335	Other motor vehicle parts manuf	336390	Manuf
336	Motor vehicle steering, suspension component (except spring), and brake systems manuf	336330, 336340	Manuf
337	Aircraft manuf	336411	Manuf
338	Aircraft engine and engine parts manuf	336412	Manuf
339	Other aircraft parts and auxiliary equipment manuf	336413	Manuf
340	Guided missile and space vehicle manuf	336414	Manuf
341	Propulsion units and parts for space vehicles and guided missiles manuf	336415, 336419	Manuf
342	Railroad rolling stock manuf	336510	Manuf
343	Ship building and repairing	336611	Manuf
344	Boat building	336612	Manuf
345	Motorcycle, bicycle, and parts manuf	336991	Manuf
346	Military armored vehicle, tank, and tank component manuf	336992	Manuf
347	All other transportation equipment manuf	336999	Manuf
348	Wood kitchen cabinet and countertop manuf	337110	Secondary For
349	Upholstered household furniture manuf	337121	Secondary For
350	Nonupholstered wood household furniture manuf	337122	Secondary For
351	Other household nonupholstered furniture manuf	337126	Secondary For
352	Institutional furniture manuf	337127	Secondary For
353	Wood office furniture manuf	337211	Secondary For
354	Custom architectural woodwork and millwork	337212	Secondary For
355	Office furniture, except wood, manuf	337214	Manuf
356	Showcase, partition, shelving, and locker manuf	337215	Secondary For
357	Mattress manuf	337910	Secondary For
358	Blind and shade manuf	337920	Secondary For
359	Surgical and medical instrument manuf	339112	Manuf
360	Surgical appliance and supplies manuf	339113	Manuf
361	Dental equipment and supplies manuf	339114	Manuf
362	Ophthalmic goods manuf	339115	Manuf
363	Dental laboratories	339116	Manuf
364	Jewelry and silverware manuf	339910	Manuf
365	Sporting and athletic goods manuf	339920	Manuf
366	Doll, toy, and game manuf	339930	Manuf
367	Office supplies (except paper) manuf	339940	Manuf
368	Sign manuf	339950	Manuf
369	Gasket, packing, and sealing device manuf	339991	Manuf
370	Musical instrument manuf	339992	Manuf
371	Fasteners, buttons, needles, and pins manuf	339993	Manuf
372	Broom, brush, and mop manuf	339994	Manuf

Table B.1. IMPLAN 528 Industry Sector Descriptions, NAICS and Agri-Forestry Aggregation Designation

Sector	Description	2022 NAICS	Agri-Forestry ^a
373	Burial casket manuf	339995	Manuf
374	All other miscellaneous manuf	339999	Manuf
375	Wholesale - Motor vehicle and motor vehicle parts and supplies	423110, 423120, 423130, 423140	Wholesale Trade
376	Wholesale - Professional and commercial equipment and supplies	423410, 423420, 423430, 423440, 423450, 423460, 423490	Wholesale Trade
377	Wholesale - Household appliances and electrical and electronic goods	423610, 423620, 423690	Wholesale Trade
378	Wholesale - Machinery, equipment, and supplies	423810, 423820, 423830, 423840, 423850, 423860	Wholesale Trade
379	Wholesale - Other durable goods merchant wholesalers	423210, 423220, 423310, 423320, 423330, 423390, 423510, 423520, 423710, 423720, 423730, 423740, 423910, 423920, 423930, 423940, 423990	Wholesale Trade
380	Wholesale - Drugs and druggists' sundries	424210	Wholesale Trade
381	Wholesale - Grocery and related product wholesalers	424410, 424420, 424430, 424440, 424450, 424460, 424470, 424480, 424490	Wholesale Trade
382	Wholesale - Petroleum and petroleum products	424710, 424720	Wholesale Trade
383	Wholesale - Other nondurable goods merchant wholesalers	424110, 424120, 424130, 424310, 424340, 424350, 424510, 424520, 424590, 424610, 424690, 424810, 424820, 424910, 424920, 424930, 424940, 424950, 424990	Wholesale Trade
384	Wholesale - Wholesale electronic markets and agents and brokers	425120	Wholesale Trade
385	Retail - Motor vehicle and parts dealers	441110, 441120, 441210, 441222, 441227, 441330, 441340	Retail Trade
386	Retail - Furniture and home furnishings stores	449110, 449121, 449122, 449129	Retail Trade
387	Retail - Electronics and appliance stores	449210	Retail Trade
388	Retail - Building material and garden equipment and supplies stores	444110, 444120, 444140, 444180, 444230, 444240, 445110, 445131, 445230, 445240, 445250, 445291, 445292, 445298, 445320	Retail Trade
389	Retail - Food and beverage stores	445292, 445298, 445320	Retail Trade
390	Retail - Health and personal care stores	456110, 456120, 456130, 456191, 456199	Retail Trade
391	Retail - Gasoline stores	457110, 457120	Retail Trade
392	Retail - Clothing and clothing accessories stores	458110, 458210, 458310, 458320	Retail Trade
393	Retail - Sporting goods, hobby, musical instrument and book stores	459110, 459120, 459130, 459140, 459210	Retail Trade
394	Retail - General merchandise stores	455110, 455211, 455219, 459310, 459410, 459420, 459510, 459910, 459920, 459930, 459991, 459999	Retail Trade
395	Retail - Miscellaneous store retailers	459930, 459991, 459999	Retail Trade
396	Air transportation	481111, 481112, 481211, 481212, 481219	Transportation
397	Rail transportation	482111, 482112	Transportation
398	Water transportation	483111, 483112, 483113, 483114, 483211, 483212	Transportation
399	Truck transportation	484110, 484121, 484122, 484210, 484220, 484230, 485111, 485112, 485113, 485119, 485210, 485310, 485320, 485410, 485510, 485991, 485999	Transportation
400	Transit and ground passenger transportation	485320, 485410, 485510, 485991, 485999	Transportation
401	Pipeline transportation	486110, 486210, 486910, 486990	Transportation
402	Scenic and sightseeing transportation and support activities for transportation	487110, 487210, 487990, 488111, 488119, 488190, 488210, 488310, 488320, 488330, 488390, 488410, 488490, 488510, 488991, 488999	Transportation
403	Couriers and messengers	492110, 492210	Services
404	Warehousing and storage	493110, 493120, 493130, 493190	Services
405	Newspaper publishers	513110	Services
406	Periodical publishers	513120	Services
407	Book publishers	513130	Services
408	Directory, mailing list, and other publishers	513140, 513199	Services

Table B.1. IMPLAN 528 Industry Sector Descriptions, NAICS and Agri-Forestry Aggregation Designation

Sector	Description	2022 NAICS	Agri-Forestry ^a
409	Greeting card publishing	513191	Services
410	Software publishers	513210	Services
411	Motion picture and video industries	512110, 512120, 512131, 512132, 512191, 512199	Services
412	Sound recording industries	512230, 512240, 512250, 512290	Services
413	Radio and television broadcasting	516110, 516120, 516210	Services
414	Cable and other subscription programming	516210	Services
415	Wired telecommunications carriers	517111	Services
416	Wireless telecommunications carriers (except satellite)	517112, 517122	Services
417	Satellite, telecommunications resellers, and all other telecommunications	517121, 517122, 517410, 517810	Services
418	Data processing, hosting, and related services	518210	Services
419	News syndicates, libraries, archives and all other information services	516210, 519210, 519290	Services
420	Internet publishing and broadcasting and web search portals	513110, 513120, 513130, 513191, 513199, 516210, 519290	Services
421	Nondepository credit intermediation and related activities	522210, 522220, 522291, 522292, 522299, 522310, 522320, 522390	Finance
422	Securities and commodity contracts intermediation and brokerage	523150, 523160, 523210	Finance
423	Monetary authorities and depository credit intermediation	521110, 522110, 522130, 522180	Finance
424	Other financial investment activities	523910, 523940, 523991, 523999	Finance
425	Direct life insurance carriers	524113	Insurance
426	Insurance carriers, except direct life	524114, 524126, 524127, 524128, 524130	Insurance
427	Insurance agencies, brokerages, and related activities	524210, 524291, 524292, 524298	Insurance
428	Funds, trusts, and other financial vehicles	525110, 525120, 525190, 525910, 525920, 525990	Finance
429	Other real estate	531120, 531130, 531190, 531210, 531311, 531312, 531320, 531390	Real Estate
430	Tenant-occupied housing	531110	Real Estate
431	Owner-occupied housing		Real Estate
432	Automotive equipment rental and leasing	532111, 532112, 532120	Services
433	General and consumer goods rental except video tapes and discs	532210, 532281, 532283, 532284, 532289, 532310	Services
434	Video tape and disc rental	532282	Services
435	Commercial and industrial machinery and equipment rental and leasing	532411, 532412, 532420, 532490	Services
436	Lessors of nonfinancial intangible assets	533110	Services
437	Legal services	541110, 541191, 541199	Services
438	Accounting, tax preparation, bookkeeping, and payroll services	541211, 541213, 541214, 541219	Services
439	Architectural, engineering, and related services	541310, 541320, 541330, 541340, 541350, 541360, 541370, 541380	Services
440	Specialized design services	541410, 541420, 541430, 541490	Services
441	Custom computer programming services	541511	Services
442	Computer systems design services	541512	Services
443	Other computer related services, including facilities management	541513, 541519	Services
444	Management consulting services	541611, 541612, 541613, 541614, 541618	Services
445	Environmental and other technical consulting services	541620, 541690	Services
446	Scientific research and development services	541713, 541714, 541715, 541720	Services
447	Advertising, public relations, and related services	541810, 541820, 541830, 541840, 541850, 541860, 541870, 541890	Services
448	Photographic services	541921, 541922	Services
449	Veterinary services	541940	Services

Table B.1. IMPLAN 528 Industry Sector Descriptions, NAICS and Agri-Forestry Aggregation Designation

Sector	Description	2022 NAICS	Agri-Forestry ^a
450	All other miscellaneous professional, scientific, and technical services	541910, 541930, 541990	Services
451	Management of companies and enterprises	551111, 551112, 551114	Services
452	Office administrative services	561110	Services
453	Facilities support services	561210	Services
454	Employment services	561311, 561312, 561320, 561330	Services
455	Business support services	561410, 561421, 561422, 561431, 561439, 561440, 561450, 561491, 561492, 561499	Services
456	Travel arrangement and reservation services	561510, 561520, 561591, 561599	Services
457	Investigation and security services	561611, 561612, 561613, 561621, 561622	Services
458	Services to buildings	561710, 561720, 561740, 561790	Services
459	Landscape and horticultural services	561730	Services
460	Other support services	561910, 561920, 561990	Services
461	Waste management and remediation services	562111, 562112, 562119, 562211, 562212, 562213, 562219, 562910, 562920, 562991, 562998	Services
462	Elementary and secondary schools	611110	Government
463	Junior colleges, colleges, universities, and professional schools	611210, 611310	Government
464	Other educational services	611410, 611420, 611430, 611511, 611512, 611513, 611519, 611610, 611620, 611630, 611691, 611692, 611699, 611710	Services
465	Offices of physicians	621111, 621112	Services
466	Offices of dentists	621210	Services
467	Offices of other health practitioners	621310, 621320, 621330, 621340, 621391, 621399	Services
468	Outpatient care centers	621410, 621420, 621491, 621492, 621493, 621498	Services
469	Medical and diagnostic laboratories	621511, 621512	Services
470	Home health care services	621610	Services
471	Other ambulatory health care services	621910, 621991, 621999	Services
472	Hospitals	622110, 622210, 622310	Services
473	Nursing and community care facilities	623110, 623311, 623312	Services
474	Residential mental health, substance abuse, and other residential care facilities	623210, 623220, 623990	Services
475	Individual and family services	624110, 624120, 624190	Services
476	Child day care services	624410	Services
477	Community food, housing, and other relief services, including rehabilitation services	624210, 624221, 624229, 624230, 624310	Services
478	Performing arts companies	711110, 711120, 711130, 711190	Services
479	Commercial Sports Except Racing	711211, 711219	Services
480	Racing and Track Operation	711212	Services
481	Independent artists, writers, and performers	711510	Services
482	Promoters of performing arts and sports and agents for public figures	711310, 711320, 711410	Services
483	Museums, historical sites, zoos, and parks	712110, 712120, 712130, 712190	Services
484	Amusement parks and arcades	713110, 713120	Services
485	Gambling industries (except casino hotels)	713210, 713290	Services
486	Other amusement and recreation industries	713910, 713920, 713930, 713990	Services
487	Fitness and recreational sports centers	713940	Services
488	Bowling centers	713950	Services
489	Hotels and motels, including casino hotels	721110, 721120	Services
490	Other accommodations	721191, 721199, 721211, 721214, 721310	Services
491	Full-service restaurants	722511	Services
492	Limited-service restaurants	722513	Services
493	All other food and drinking places	722310, 722320, 722330, 722410, 722514, 722515	Services
494	Automotive repair and maintenance, except car washes	811111, 811114, 811121, 811122, 811191, 811198	Services
495	Car washes	811192	Services

Table B.1. IMPLAN 528 Industry Sector Descriptions, NAICS and Agri-Forestry Aggregation Designation

Sector	Description	2022 NAICS	Agri-Forestry ^a
496	Electronic and precision equipment repair and maintenance	811210	Services
497	Commercial and industrial machinery and equipment repair and maintenance	811310	Services
498	Personal and household goods repair and maintenance	811411, 811412, 811420, 811430, 811490	Services
499	Personal care services	812111, 812112, 812113, 812191, 812199	Services
500	Death care services	812210, 812220	Services
501	Dry-cleaning and laundry services	812310, 812320, 812331, 812332	Services
502	Other personal services	812910, 812921, 812922, 812930, 812990	Services
503	Religious organizations	813110	Miscellaneous
504	Grantmaking, giving, and social advocacy organizations	813211, 813212, 813219, 813311, 813312, 813319	Miscellaneous
505	Business and professional associations	813910, 813920	Miscellaneous
506	Labor and civic organizations	813410, 813930, 813940, 813990	Miscellaneous
507	Private households	814110	Services
508	Postal service	491110	Government
509	Federal electric utilities		Government
510	Other federal government enterprises		Government
511	State government passenger transit		Government
512	State government electric utilities		Government
513	Other state government enterprises		Government
514	Local government passenger transit		Government
515	Local government electric utilities		Government
516	Other local government enterprises		Government
517	* Not an industry (Used and secondhand goods) ^b		Miscellaneous
518	* Not an industry (Scrap) ^c		Miscellaneous
519	* Not an industry (Rest of world adjustment) ^d		Miscellaneous
520	* Not an industry (Noncomparable foreign imports) ^e		Miscellaneous
521	* Employment and payroll of state govt, education		Government
522	* Employment and payroll of state govt, hospitals and health services		Government
523	* Employment and payroll of state govt, other services		Government
524	* Employment and payroll of local govt, education		Government
525	* Employment and payroll of local govt, hospitals and health services		Government
526	* Employment and payroll of local govt, other services		Government
527	* Employment and payroll of federal govt, military		Government
528	* Employment and payroll of federal govt, non-military		Government

^aIdentification of North American Industry Classification System (NAICS) sector included in the Agri-Forestry industrial complex

^bGoods (commodities) previously used and then resold.

^cCommodities cast off as part of a production process and then resold as scrap.

^dNet foreign flows of factor income.

^eGoods not available in the nation.

Source: IMPLAN Group, LLC, 2023 Data

Appendix C: Total Industry Output, Employment, Labor Income, and Total Value-Added by Agriculture and Forestry Sectors for Tennessee, 2023

Table C.1. Direct Impacts from Agriculture and Forestry^a, Tennessee, 2023

Sector	TIO	Employment	Labor Income	TVA
	(million \$)	(number)	(million \$)	(million \$)
<i>Agricultural Inputs</i>				
<u>Agricultural Chemicals</u>				
Nitrogenous fertilizer	6	3	0 ^b	3
Phosphatic fertilizer	21	14	2	10
Fertilizer mixing	12	17	2	2
Pesticide & other agricultural chemical	651	360	50	196
Lime	115	164	22	58
<i>Total --</i>	805	558	76	268
<u>Agricultural Machinery</u>				
Farm machinery & equipment	587	782	68	187
Lawn & garden equipment	1,018	1,667	113	297
<i>Total --</i>	1,605	2,449	181	484
<i>Agricultural Inputs Total --</i>	2,410	3,007	257	752
<i>Primary Agriculture</i>				
Oilseed farming	1,018	7,173	30	621
Grain farming	954	8,505	41	2
Vegetable & melon farming	172	2,734	18	85
Fruit farming	21	681	3	9
Tree nut farming	2	105	1	2
Greenhouse, nursery, & floriculture production	424	5,624	86	252
Tobacco farming	67	517	9	36
Cotton farming	272	1,251	47	97
All other crop farming	166	10,549	23	66
Beef cattle farming	888	26,516	13	189
Dairy cattle & milk production	102	676	5	25
Poultry & egg production	937	2,190	48	220
Animal production, except cattle & poultry & eggs	206	8,141	23	138
Commercial fishing	13	544	-2	13
Commercial hunting & trapping	26	199	0 ^b	24
Support activities for agriculture & forestry	262	7,278	238	246
<i>Primary Agriculture Total --</i>	5,529	82,684	584	2,024
<i>Secondary Agriculture</i>				
<u>Foods</u>				
Dog & cat food	847	801	84	231
Other animal food	778	473	46	125
<i>Total --</i>	1,625	1,274	130	356
<u>Grain & Oilseed Milling</u>				
Flour milling	625	448	50	141
Rice milling	465	487	59	145
Wet corn milling	777	380	54	166
Soybean & other oilseed processing	4,273	670	77	490
Fats & oils refining & blending	457	192	17	63
Breakfast cereal	486	439	60	173
<i>Total --</i>	7,084	2,616	318	1,179

Table C.1. Direct Impacts from Agriculture and Forestry^a, Tennessee, 2023

Sector	TIO	Employment	Labor Income	TVA
	(million \$)	(number)	(million \$)	(million \$)
<u>Sugar & Confectionary Products</u>				
Beet sugar	0	0	0	0
Sugar cane mills & refining	107	82	7	38
Nonchocolate confectionery	855	1,680	150	197
Chocolate & confectionery (from cacao beans)	15	26	2	5
Confectionery (from purchased chocolate)	616	1,297	126	193
<i>Total --</i>	<i>1,593</i>	<i>3,085</i>	<i>285</i>	<i>433</i>
<u>Fruit & Vegetable Preserving & Specialty Foods</u>				
Frozen fruits, juices & vegetables	372	535	49	132
Frozen specialties	700	1,632	139	227
Canned fruits & vegetables	674	898	129	268
Canned specialties	219	266	22	43
Dehydrated food products	14	27	2	3
<i>Total --</i>	<i>1,979</i>	<i>3,358</i>	<i>341</i>	<i>673</i>
<u>Dairy Products</u>				
Cheese	970	890	70	166
Dry, condensed, & evaporated dairy product	829	643	56	226
Fluid milk	789	945	90	167
Creamery butter	164	99	8	22
Ice cream & frozen dessert	21	52	2	4
<i>Total --</i>	<i>2,773</i>	<i>2,629</i>	<i>225</i>	<i>585</i>
<u>Animal Slaughtering & Processing</u>				
Poultry processing	3,825	10,198	651	1,019
Animal, except poultry, slaughtering	1,331	1,784	145	240
Meat processed from carcasses	1,062	1,862	136	182
Rendering & meat byproduct processing	148	222	17	19
<i>Total --</i>	<i>6,367</i>	<i>14,066</i>	<i>949</i>	<i>1,460</i>
<u>Seafood product Preparation & Packaging</u>	25	41	4	7
<u>Bakeries & Tortillas</u>				
Bread & bakery product, except frozen	1,322	6,805	361	578
Frozen cakes & other pastries	478	1,669	162	217
Cookie & cracker	1,275	3,033	285	495
Dry pasta, mixes, & dough	433	576	52	161
Tortilla	43	143	11	11
<i>Total --</i>	<i>3,551</i>	<i>12,225</i>	<i>870</i>	<i>1,462</i>
<u>Other Foods</u>				
Roasted nuts & peanut butter	35	48	4	5
Other snack food	2,448	3,017	262	914
Coffee & tea	1,140	1,496	124	304
Flavoring syrup & concentrate	26	9	2	15
Mayonnaise, dressing, & sauce	502	743	60	132
Spice & extract	34	50	4	10
All other food	521	1,034	92	145
<i>Total --</i>	<i>4,706</i>	<i>6,397</i>	<i>548</i>	<i>1,527</i>

Table C.1. Direct Impacts from Agriculture and Forestry^a, Tennessee, 2023

Sector	TIO	Employment	Labor Income	TVA
	(million \$)	(number)	(million \$)	(million \$)
<u>Beverages</u>				
Bottled & canned soft drinks & water	987	1,319	135	306
Breweries	660	2,012	95	224
Wineries	256	673	35	88
Distilleries	2,120	2,612	237	893
<i>Total --</i>	<i>4,023</i>	<i>6,616</i>	<i>502</i>	<i>1,511</i>
<u>Tobacco Products</u>				
	<i>3,928</i>	<i>970</i>	<i>114</i>	<i>2,032</i>
<u>Textile Mills</u>				
Fiber, yarn, & thread mills	379	1,058	76	84
Broadwoven fabric mills	42	141	9	10
Narrow fabric mills & schiffli machine embroidery	15	68	4	2
Nonwoven fabric mills	314	636	49	63
Knit fabric mills	45	180	9	10
Textile & fabric finishing mills	169	508	31	35
Fabric coating mills	135	340	28	32
<i>Total --</i>	<i>1,098</i>	<i>2,932</i>	<i>206</i>	<i>235</i>
<u>Textile Products Mills</u>				
Carpet & rug mills	43	125	7	8
Curtain & linen mills	23	104	5	6
Textile bag & canvas mills	173	793	43	48
Rope, cordage, twine, tire cord & tire fabric mills	148	560	37	59
Other textile product mills	129	727	38	44
<i>Total --</i>	<i>516</i>	<i>2,310</i>	<i>130</i>	<i>164</i>
<u>Apparel</u>				
Apparel knitting mills	76	776	32	37
Cut & sew apparel contractors	63	712	31	29
Cut & sew apparel (except contractors)	379	2,291	135	159
Apparel accessories & other apparel	25	161	11	12
<i>Total --</i>	<i>543</i>	<i>3,938</i>	<i>209</i>	<i>238</i>
<u>Leather & Allied Products</u>				
Leather & hide tanning & finishing	34	115	7	10
Footwear	31	181	9	9
Other leather & allied product	25	137	8	9
<i>Total --</i>	<i>91</i>	<i>433</i>	<i>24</i>	<i>27</i>
<i>Secondary Agriculture Total --</i>	<i>39,901</i>	<i>62,890</i>	<i>4,855</i>	<i>11,888</i>
<i>Agriculture Total --</i>	<i>47,839</i>	<i>148,581</i>	<i>5,696</i>	<i>14,664</i>
<u>Forestry Inputs</u>				
Sawmill, Woodworking, & Paper Machinery	72	209	19	6
<u>Timber</u>				
Forestry, forest products, & timber tract production	11	116	7	10
Commercial logging	230	2,620	141	219
<i>Total --</i>	<i>241</i>	<i>2,736</i>	<i>148</i>	<i>229</i>

Table C.1. Direct Impacts from Agriculture and Forestry^a, Tennessee, 2023

Sector	TIO	Employment	Labor Income	TVA
	(million \$)	(number)	(million \$)	(million \$)
Forestry Inputs Total --	313	2,946	167	235
Primary Forestry				
Sawmills	1,212	2,447	138	281
Wood preservation	81	80	7	29
Pulp mills	49	57	8	19
Paper mills	1,992	1,616	258	1,015
Paperboard Mills	1,296	1,062	155	575
Primary Forestry Total --	4,629	5,262	567	1,918
Secondary Forestry				
<u>Veneer, Plywood, & Engineered Wood Products</u>				
Veneer & plywood	48	121	7	17
Engineered wood member & truss	648	1,491	115	206
Reconstituted wood product	217	191	21	90
<i>Total --</i>	<i>913</i>	<i>1,803</i>	<i>144</i>	<i>313</i>
<u>Wood Windows & Doors & Millwork</u>				
Wood windows & door	715	2,136	169	281
Cut stock, resawing lumber, & planning	144	333	22	53
Other millwork, including flooring	363	1,066	63	133
<i>Total --</i>	<i>1,221</i>	<i>3,535</i>	<i>255</i>	<i>467</i>
<u>Wood Containers & Pallets</u>				
	736	2,785	167	255
<u>Manufactured Homes (Mobile Homes)</u>				
Manufactured home (mobile home)	1,023	3,013	278	352
Prefabricated wood building	167	422	28	61
<i>Total --</i>	<i>1,190</i>	<i>3,434</i>	<i>306</i>	<i>413</i>
<u>All Other Miscellaneous Wood Products</u>				
	191	627	42	74
<u>Paperboard Containers</u>				
	4,018	6,162	530	1,250
<u>Paper Bags & Coated & Treated Paper</u>				
	1,084	1,865	171	443
<u>Stationery Products</u>				
	408	809	89	138
<u>Other Converted Paper Products</u>				
Sanitary paper product	955	769	97	464
All other converted paper product	294	617	37	115
<i>Total --</i>	<i>1,249</i>	<i>1,387</i>	<i>134</i>	<i>578</i>
<u>Wood Kitchen Cabinets & Countertops</u>				
	341	1,803	118	131
<u>Household & Institutional Furniture</u>				
Upholstered household furniture	840	3,958	231	255
Nonupholstered wood household furniture	68	385	20	22

Table C.1. Direct Impacts from Agriculture and Forestry^a, Tennessee, 2023

Sector	TIO	Employment	Labor Income	TVA
	(million \$)	(number)	(million \$)	(million \$)
Other household nonupholstered furniture	62	144	10	13
Institutional furniture	153	688	43	48
<i>Total --</i>	<i>1,123</i>	<i>5,175</i>	<i>305</i>	<i>338</i>
<u>Office Furniture</u>				
Wood office furniture	16	68	3	4
Custom architectural woodwork & millwork	99	522	35	17
Showcase, partition, shelving, & locker	338	1,244	97	114
<i>Total --</i>	<i>453</i>	<i>1,834</i>	<i>135</i>	<i>135</i>
<u>Other Furniture Related Products</u>				
Mattress	201	489	30	41
Blind & shade	19	83	5	2
<i>Total --</i>	<i>220</i>	<i>572</i>	<i>35</i>	<i>43</i>
<i>Secondary Forestry Total --</i>	<i>13,147</i>	<i>31,790</i>	<i>2,432</i>	<i>4,578</i>
<i>Forestry Total --</i>	<i>18,090</i>	<i>39,998</i>	<i>3,166</i>	<i>6,731</i>
<i>Agriculture & Forestry Total --</i>	<i>65,929</i>	<i>188,579</i>	<i>8,862</i>	<i>21,395</i>
<i>Construction --</i>	<i>49,319</i>	<i>285,977</i>	<i>23,657</i>	<i>24,758</i>
<i>Finance --</i>	<i>34,640</i>	<i>159,635</i>	<i>10,006</i>	<i>16,239</i>
<i>Government --</i>	<i>65,994</i>	<i>492,334</i>	<i>38,480</i>	<i>50,096</i>
<i>Insurance --</i>	<i>28,907</i>	<i>75,666</i>	<i>6,931</i>	<i>13,838</i>
<i>Manufacturing --</i>	<i>168,121</i>	<i>270,515</i>	<i>26,508</i>	<i>48,131</i>
<i>Mining --</i>	<i>3,418</i>	<i>7,344</i>	<i>425</i>	<i>1,231</i>
<i>Miscellaneous --</i>	<i>6,498</i>	<i>66,317</i>	<i>4,335</i>	<i>4,504</i>
<i>Real Estate --</i>	<i>82,974</i>	<i>201,251</i>	<i>6,988</i>	<i>59,210</i>
<i>Retail Trade --</i>	<i>49,670</i>	<i>397,760</i>	<i>19,582</i>	<i>37,106</i>
<i>Services --</i>	<i>330,151</i>	<i>2,134,715</i>	<i>154,286</i>	<i>202,448</i>
<i>Transportation --</i>	<i>27,000</i>	<i>138,358</i>	<i>10,602</i>	<i>14,014</i>
<i>Utilities --</i>	<i>7,074</i>	<i>5,042</i>	<i>1,025</i>	<i>3,827</i>
<i>Wholesale Trade --</i>	<i>60,361</i>	<i>149,218</i>	<i>15,779</i>	<i>34,518</i>
<i>Total Economy --</i>	<i>980,054</i>	<i>4,572,710</i>	<i>327,466</i>	<i>531,314</i>

Appendix D. Total Economic Contributions from the Agriculture and Forestry Sectors, Tennessee, 2023

Table D.1. Total Impacts from Agriculture and Forestry^a, Tennessee, 2023

Sector	TIO (million \$)				Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
<i>Agricultural Inputs</i>																
<i>Agricultural Chemicals</i>																
Nitrogenous fertilizer	1.41	9	1.57	10	4.19	13	5.98	18	2.66	1	3.38	2	1.51	4	1.74	5
Phosphatic fertilizer	1.30	27	1.45	30	2.63	38	3.81	54	1.89	4	2.41	5	1.34	13	1.55	15
Fertilizer mixing	1.37	17	1.56	19	2.07	35	2.79	48	1.92	3	2.44	4	2.04	5	2.65	6
Pesticide & other ag chemicals	1.30	844	1.43	929	2.86	1,029	4.13	1,485	2.20	109	2.80	138	1.52	297	1.79	350
Lime	1.39	159	1.62	185	1.89	310	2.75	452	1.54	34	1.96	43	1.36	79	1.65	95
<i>Total --</i>		1,056		1,174		1,425		2,057		151		192		398		471
<i>Agricultural Machinery</i>																
Farm machinery & equipment	1.39	816	1.58	927	2.13	1,663	2.89	2,259	2.08	142	2.64	181	1.61	301	1.99	371
Lawn & garden equipment	1.38	1,401	1.56	1,584	1.87	3,124	2.46	4,107	2.09	235	2.65	299	1.65	491	2.04	605
<i>Total --</i>		2,217		2,511		4,786		6,366		377		479		792		976
<i>Agricultural Inputs Total --</i>		3,273		3,685		6,211		8,423		528		671		1,190		1,447
<i>Primary Agriculture</i>																
Oilseed farming	1.23	1,253	1.30	1,327	1.12	8,001	1.17	8,399	3.24	96	4.11	122	1.19	742	1.27	789
Grain farming	1.52	1,446	1.65	1,574	1.18	10,061	1.26	10,749	3.99	165	5.08	210	150.16	242	199.99	323
Vegetable & melon farming	1.30	224	1.44	248	1.06	2,896	1.11	3,024	1.76	31	2.24	39	1.29	110	1.46	125
Fruit farming	1.29	27	1.47	31	1.03	700	1.06	720	1.49	5	1.90	6	1.32	12	1.57	14
Tree nut farming	1.08	2	1.33	2	1.00	106	1.03	108	1.07	1	1.35	1	1.04	2	1.23	2
Greenhouse, nursery, & floriculture production	1.21	513	1.41	598	1.05	5,922	1.13	6,379	1.28	110	1.63	140	1.18	298	1.39	352
Tobacco farming	1.28	85	1.45	96	1.12	581	1.24	640	1.53	14	1.94	18	1.25	45	1.44	52
Cotton farming	1.30	354	1.50	409	1.23	1,538	1.46	1,829	1.49	70	1.89	89	1.42	138	1.78	172
All other crop farming	1.39	229	1.57	260	1.02	10,737	1.03	10,898	1.67	39	2.12	50	1.46	96	1.75	115
Beef cattle farming	1.28	1,140	1.36	1,204	1.03	27,360	1.04	27,702	6.13	82	7.80	105	1.65	312	1.86	352
Dairy cattle & milk production	1.45	147	1.58	161	1.22	824	1.33	896	3.78	17	4.81	22	1.87	46	2.21	54
Poultry & egg production	1.36	1,278	1.47	1,378	1.45	3,184	1.70	3,718	2.68	129	3.41	164	1.69	372	1.97	435
Commercial fishing	1.18	244	1.31	270	1.02	8,275	1.03	8,415	1.47	34	1.87	43	1.13	156	1.25	172
Animal production, except cattle, poultry, & eggs	1.00	13	0.89	11	1.00	544	0.99	536	0.99	-2	1.28	-2	1.00	13	0.93	12
Commercial hunting & trapping	1.05	27	1.07	27	1.03	204	1.04	207	1.93	1	2.45	1	1.03	24	1.04	25
Support activities for ag & forestry	1.04	272	1.76	461	1.00	7,312	1.14	8,319	1.01	241	1.29	307	1.02	251	1.50	369

Table D.1. Total Impacts from Agriculture and Forestry^a, Tennessee, 2023

Sector	TIO (million \$)				Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
Primary Agriculture Total --		7,254		8,059		88,244		92,540		1,034		1,315		2,859		3,362
Secondary Agriculture																
<u>Foods</u>																
Dog & cat food	1.27	1,079	1.41	1,198	2.31	1,848	3.10	2,487	1.84	154	2.34	196	1.50	346	1.82	420
Other animal food	1.48	1,149	1.62	1,260	5.13	2,426	6.39	3,022	3.12	144	3.96	183	2.31	288	2.86	357
<i>Total --</i>		2,229		2,457		4,274		5,509		298		379		634		778
<u>Grain & Oilseed Milling</u>																
Flour milling	1.66	1,039	1.85	1,159	6.25	2,796	7.69	3,443	3.11	156	3.95	198	2.21	311	2.74	386
Rice milling	1.55	723	1.74	812	4.25	2,071	5.24	2,551	1.97	116	2.50	147	1.65	240	2.04	296
Wet corn milling	1.65	1,283	1.83	1,420	8.51	3,239	10.46	3,981	3.30	179	4.20	227	2.25	374	2.77	460
Soybean & other oilseed processing	1.51	6,432	1.62	6,927	15.60	10,452	19.60	13,128	8.34	645	10.58	819	3.49	1,712	4.13	2,023
Fats & oils refining & blending	1.26	576	1.35	619	3.76	720	4.96	950	3.19	56	4.05	71	2.02	128	2.44	155
Breakfast cereal	1.26	610	1.41	686	2.14	941	3.08	1,353	1.65	99	2.10	126	1.37	236	1.64	284
<i>Total --</i>		10,663		11,622		20,218		25,406		1,251		1,588		3,001		3,603
<u>Sugar & Confectionary Products</u>																
Sugar cane mills & refining	1.23	132	1.35	144	2.27	185	3.08	252	2.14	16	2.71	20	1.36	51	1.56	59
Nonchocolate confectionery	1.43	1,222	1.68	1,434	1.91	3,213	2.59	4,360	1.85	277	2.35	351	1.99	393	2.67	526
Chocolate & confectionery from cacao beans	1.37	21	1.59	24	2.49	64	3.18	82	1.81	4	2.30	5	1.63	8	2.06	10
Confectionery from purchased chocolate	1.39	854	1.64	1,013	1.84	2,390	2.50	3,249	1.65	207	2.09	263	1.65	319	2.16	419
<i>Total --</i>		2,229		2,615		5,852		7,943		504		640		771		1,013
<u>Fruit & Vegetable Preserving & Specialty Foods</u>																
Frozen fruits, juices & vegetables	1.43	530	1.64	611	2.45	1,309	3.26	1,746	2.14	106	2.71	134	1.65	217	2.04	268
Frozen specialties	1.32	925	1.55	1,082	1.76	2,865	2.28	3,714	1.48	205	1.88	260	1.43	326	1.87	425
Canned fruits & vegetables	1.31	883	1.54	1,039	2.01	1,805	2.95	2,647	1.58	203	2.00	258	1.42	380	1.78	478
Canned specialties	1.19	260	1.32	288	1.79	474	2.36	626	1.65	37	2.09	46	1.50	65	1.91	83
Dehydrated food products	1.23	18	1.40	20	1.53	41	2.01	55	1.62	3	2.05	4	1.70	4	2.30	6
<i>Total --</i>		2,616		3,040		6,494		8,788		554		703		993		1,259

Table D.1. Total Impacts from Agriculture and Forestry^a, Tennessee, 2023

Sector	TIO (million \$)				Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
<u>Dairy Products</u>																
Cheese	1.31	1,275	1.44	1,402	2.69	2,394	3.47	3,083	2.39	166	3.04	211	1.92	318	2.40	398
Dry, condensed, & evaporated dairy products	1.33	1,102	1.46	1,212	2.87	1,843	3.79	2,436	2.56	143	3.26	182	1.61	365	1.92	434
Fluid milk	1.38	1,086	1.56	1,228	2.54	2,397	3.35	3,167	2.06	186	2.62	236	1.90	316	2.43	406
Creamery butter	1.43	234	1.58	260	4.30	427	5.68	564	4.31	33	5.47	42	2.72	61	3.43	77
Ice cream & frozen dessert	1.41	30	1.60	34	1.69	89	2.11	111	2.26	5	2.87	7	2.15	9	2.79	11
<i>Total --</i>		3,727		4,136		7,149		9,360		533		677		1,068		1,325
<u>Animal Slaughtering & Processing</u>																
Poultry processing	1.34	5,143	1.54	5,891	1.49	15,208	1.89	19,254	1.50	977	1.90	1,240	1.55	1,583	2.01	2,053
Animal, except poultry, slaughtering	1.75	2,324	1.93	2,568	11.82	21,091	12.56	22,411	2.20	319	2.79	405	2.60	625	3.24	778
Meat processed from carcasses	1.47	1,562	1.65	1,749	5.13	9,546	5.67	10,558	1.80	244	2.28	310	2.18	396	2.82	513
Rendering & meat byproduct processing	1.44	214	1.66	247	2.51	557	3.30	734	2.48	43	3.14	54	2.84	55	3.91	75
<i>Total --</i>		9,243		10,455		46,402		52,957		1,583		2,009		2,658		3,419
<u>Seafood Product Prep & Packaging</u>																
	1.34	34	1.54	39	2.29	95	2.95	122	1.87	7	2.38	8	1.70	12	2.17	15
<u>Bakeries & Tortillas</u>																
Frozen cakes & other pastries	1.32	631	1.67	798	1.38	2,297	1.92	3,200	1.34	218	1.71	277	1.39	301	1.87	405
Bread & bakery product, except frozen	1.37	1,809	1.68	2,221	1.32	9,015	1.65	11,244	1.49	538	1.89	683	1.44	833	1.89	1,092
Cookies & crackers	1.33	1,699	1.60	2,035	1.59	4,821	2.19	6,636	1.54	438	1.95	556	1.45	718	1.88	929
Dry pasta, mixes, & dough	1.36	589	1.55	670	2.23	1,284	2.99	1,723	2.03	106	2.58	135	1.49	241	1.81	292
Tortilla	1.40	60	1.70	73	1.53	218	2.01	286	1.55	16	1.96	21	1.79	20	2.51	28
<i>Total --</i>		4,789		5,797		17,635		23,088		1,316		1,671		2,112		2,745
<u>Other Foods</u>																
Roasted nuts & peanut butter	1.63	57	1.87	66	3.52	169	4.51	216	3.14	11	3.98	15	3.44	17	4.57	22
Other snack food	1.34	3,280	1.50	3,680	3.17	9,576	3.89	11,738	1.99	522	2.53	663	1.46	1,337	1.74	1,588
Coffee & tea	1.40	1,594	1.58	1,803	3.07	4,601	3.83	5,731	2.20	273	2.79	346	1.78	542	2.21	673
Flavoring syrup & concentrate	1.24	32	1.36	35	4.46	38	6.45	55	2.11	4	2.68	5	1.21	19	1.34	21

Table D.1. Total Impacts from Agriculture and Forestry^a, Tennessee, 2023

Sector	TIO (million \$)				Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
Mayonnaise, dressing, & sauce	1.31	656	1.47	736	1.93	1,434	2.51	1,869	1.76	105	2.23	133	1.57	207	1.95	258
Spice & extract	1.41	48	1.62	55	3.11	154	3.86	192	2.08	9	2.64	11	1.70	18	2.11	22
All other food	1.40	731	1.64	854	2.17	2,240	2.81	2,908	1.74	161	2.21	205	1.75	255	2.28	332
<i>Total --</i>		<i>6,398</i>		<i>7,229</i>		<i>18,213</i>		<i>22,709</i>		<i>1,085</i>		<i>1,378</i>		<i>2,393</i>		<i>2,916</i>
<u>Beverages</u>																
Bottled & canned soft drinks & water	1.34	1,321	1.53	1,510	2.07	2,731	2.84	3,752	1.82	245	2.31	312	1.58	483	1.96	601
Breweries	1.34	882	1.53	1,008	1.57	3,157	1.91	3,840	1.73	165	2.19	209	1.49	335	1.85	414
Wineries	1.43	367	1.65	423	1.75	1,178	2.20	1,482	2.09	73	2.66	93	1.68	149	2.08	184
Distilleries	1.39	2,952	1.57	3,328	2.24	5,841	3.01	7,875	2.07	490	2.63	622	1.51	1,347	1.77	1,583
<i>Total --</i>		<i>5,522</i>		<i>6,269</i>		<i>12,906</i>		<i>16,949</i>		<i>973</i>		<i>1,236</i>		<i>2,313</i>		<i>2,782</i>
<u>Tobacco Products</u>																
	1.35	5,290	1.46	5,749	6.81	6,603	9.37	9,083	5.23	598	6.64	759	1.36	2,753	1.50	3,041
<u>Textile Mills</u>																
Fiber, yarn, & thread mills	1.39	526	1.62	616	1.89	2,004	2.35	2,489	1.54	117	1.96	149	1.83	154	2.50	210
Broadwoven fabric mills	1.39	59	1.64	69	1.46	206	1.86	262	1.60	14	2.03	17	1.85	18	2.54	24
Narrow fabric mills & schiffli machine embroidery	1.42	21	1.72	25	1.34	91	1.69	114	1.54	6	1.95	7	2.42	5	3.69	8
Nonwoven fabric mills	1.31	411	1.50	470	1.58	1,005	2.09	1,326	1.57	78	1.99	98	1.75	110	2.35	147
Knit fabric mills	1.46	66	1.73	78	1.46	263	1.83	329	1.76	16	2.23	20	2.10	20	2.88	28
Textile & fabric finishing mills	1.37	231	1.61	271	1.53	777	1.96	996	1.70	53	2.16	67	1.96	69	2.68	94
Fabric coating mills	1.32	177	1.56	209	1.48	503	1.98	676	1.50	42	1.91	53	1.69	54	2.31	74
<i>Total --</i>		<i>1,491</i>		<i>1,739</i>		<i>4,850</i>		<i>6,192</i>		<i>325</i>		<i>412</i>		<i>429</i>		<i>585</i>
<u>Textile Product Mills</u>																
Carpet & rug mills	1.32	57	1.50	65	1.30	163	1.64	206	1.53	10	1.93	13	1.76	14	2.37	19
Curtain & linen mills	1.33	30	1.59	36	1.29	134	1.60	166	1.46	8	1.85	10	1.66	10	2.28	14
Textile bag & canvas mills	1.25	215	1.50	259	1.25	988	1.54	1,225	1.35	57	1.71	73	1.47	70	2.04	98
Rope, cordage, twine, tire cord & tire fabric mills	1.25	185	1.49	221	1.21	678	1.56	873	1.27	47	1.62	60	1.30	76	1.68	99
Other textile product mills	1.33	171	1.63	210	1.23	895	1.52	1,106	1.33	51	1.68	64	1.48	65	2.04	89
<i>Total --</i>		<i>659</i>		<i>791</i>		<i>2,859</i>		<i>3,576</i>		<i>174</i>		<i>220</i>		<i>236</i>		<i>319</i>

Table D.1. Total Impacts from Agriculture and Forestry^a, Tennessee, 2023

Sector	TIO (million \$)				Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
Apparel																
Apparel knitting mills	1.37	104	1.77	136	1.14	883	1.36	1,053	1.28	41	1.63	52	1.40	52	1.92	72
Cut & sew apparel contractors	1.24	78	1.68	106	1.10	783	1.31	934	1.18	36	1.49	46	1.28	38	1.88	55
Cut & sew apparel except contractors	1.25	474	1.59	603	1.21	2,771	1.52	3,471	1.25	169	1.59	215	1.33	212	1.84	293
Apparel accessories & other apparel	1.31	33	1.72	43	1.29	207	1.63	262	1.25	13	1.58	17	1.36	16	1.89	23
<i>Total --</i>		689		888		4,645		5,720		260		330		318		443
Leather & Allied Products																
Leather & hide tanning & finishing	1.39	48	1.64	56	1.45	166	1.84	211	1.62	11	2.06	14	1.72	17	2.26	22
Footwear	1.75	54	2.15	66	1.49	270	1.86	336	1.82	16	2.31	20	2.30	21	3.14	29
Other leather & allied products	1.74	44	2.16	55	1.53	210	1.95	268	1.71	14	2.17	18	2.10	18	2.89	25
<i>Total --</i>		146		177		646		815		41		52		56		76
Secondary Agriculture Total --		55,725		63,006		158,841		198,217		9,502		12,062		19,747		24,320
Agriculture Total --		66,251		74,749		253,296		299,180		11,064		14,048		23,795		29,129
Forestry Inputs																
<u>Sawmill, woodworking, & paper machinery</u>	1.71	124	2.17	157	2.29	479	3.15	660	2.23	43	2.83	55	6.18	35	9.84	57
Timber																
Forestry, forest products, & timber tract production	1.05	11	1.61	17	1.12	130	1.40	162	1.06	8	1.36	10	1.05	10	1.44	14
Commercial logging	1.02	235	1.52	350	1.03	2,706	1.27	3,323	1.02	143	1.30	183	1.02	223	1.34	294
<i>Total --</i>		247		367		2,835		3,485		151		193		233		308
Forestry Inputs Total --		370		525		3,314		4,145		194		248		268		365
Primary Forestry																
Sawmills	1.56	1,886	1.81	2,198	2.51	6,134	3.19	7,807	2.88	397	3.66	506	2.46	689	3.15	884
Wood preservation	1.35	109	1.51	122	2.45	196	3.33	266	2.25	17	2.87	21	1.54	44	1.82	52
Pulp mills	1.41	70	1.65	81	2.55	146	3.65	209	1.81	15	2.31	19	1.56	30	1.95	37
Paper mills	1.29	2,572	1.47	2,924	2.44	3,936	3.60	5,821	1.74	448	2.21	570	1.30	1,315	1.51	1,534
Paperboard Mills	1.39	1,801	1.58	2,052	2.88	3,056	4.15	4,406	2.02	314	2.59	402	1.44	830	1.72	987
Primary Forestry Total --		6,437		7,377		13,467		18,509		1,190		1,518		2,908		3,494

Table D.1. Total Impacts from Agriculture and Forestry^a, Tennessee, 2023

Sector	TIO (million \$)				Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
<i>Secondary Forestry</i>																
<u>Veneer, Plywood, & Engineered Wood Products</u>																
Veneer & plywood	1.30	62	1.50	72	1.63	198	2.07	251	1.75	13	2.22	16	1.50	25	1.86	31
Engineered wood member & truss	1.43	926	1.67	1,083	1.75	2,603	2.31	3,443	1.74	201	2.21	255	1.67	346	2.15	443
Reconstituted wood products	1.24	269	1.37	298	2.07	395	2.90	553	1.76	38	2.24	48	1.28	115	1.48	133
<i>Total --</i>		1,257		1,453		3,196		4,248		251		319		486		608
<u>Wood Windows & Doors & Millwork</u>																
Wood windows & door	1.38	985	1.66	1,189	1.55	3,304	2.06	4,396	1.54	261	1.96	332	1.50	421	1.95	548
Cut stock, resawing lumber, & planing	1.46	210	1.69	243	1.86	621	2.40	800	1.91	43	2.43	54	1.62	86	2.01	107
Other millworks, including floors	1.47	534	1.72	625	1.69	1,801	2.15	2,291	1.85	117	2.36	149	1.64	219	2.07	276
<i>Total --</i>		1,729		2,057		5,726		7,487		421		535		726		931
<u>Wood Containers & Pallets</u>	1.45	1,071	1.74	1,281	1.48	4,132	1.89	5,259	1.61	269	2.05	343	1.65	419	2.16	550
<u>Manufactured Homes (Mobile Homes)</u>																
Manufactured homes (mobile homes)	1.33	1,362	1.62	1,662	1.50	4,526	2.04	6,133	1.38	385	1.76	489	1.50	528	2.03	714
Prefabricated wood buildings	1.37	228	1.59	265	1.63	687	2.10	885	1.69	47	2.15	60	1.51	91	1.89	114
<i>Total --</i>		1,590		1,926		5,213		7,019		432		549		619		829
<u>All Other Miscellaneous Wood Products</u>																
	1.41	270	1.69	323	1.56	981	2.02	1,269	1.62	69	2.06	88	1.54	114	1.99	148
<u>Paperboard Containers</u>	1.40	5,640	1.61	6,455	2.06	12,699	2.77	17,072	1.97	1,046	2.51	1,330	1.69	2,114	2.10	2,622
<u>Paper Bags & Coated & Treated Paper</u>	1.28	1,386	1.47	1,595	1.64	3,067	2.24	4,186	1.57	268	2.00	341	1.36	601	1.65	731

Table D.1. Total Impacts from Agriculture and Forestry^a, Tennessee, 2023

Sector	TIO (million \$)				Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
<u>Stationery Products</u>	1.37	561	1.65	673	1.80	1,456	2.54	2,055	1.58	141	2.02	180	1.60	221	2.10	291
<u>Other Converted Paper Products</u>																
Sanitary paper products	1.22	1,163	1.35	1,290	2.05	1,580	2.94	2,262	1.68	163	2.14	207	1.24	573	1.41	653
All other converted paper products	1.38	406	1.59	468	1.80	1,108	2.33	1,440	2.08	78	2.65	99	1.52	174	1.85	213
<i>Total --</i>		<i>1,569</i>		<i>1,757</i>		<i>2,689</i>		<i>3,702</i>		<i>241</i>		<i>306</i>		<i>748</i>		<i>865</i>
<u>Wood Kitchen Cabinets & Countertops</u>																
	1.35	463	1.71	585	1.28	2,310	1.65	2,967	1.33	157	1.69	200	1.48	194	2.06	271
<u>Household & Institutional Furniture</u>																
Upholstered household furniture	1.41	1,180	1.72	1,447	1.35	5,355	1.72	6,788	1.48	342	1.88	435	1.69	431	2.34	598
Nonupholstered wood household furniture	1.41	96	1.74	118	1.30	500	1.61	621	1.45	29	1.84	37	1.66	36	2.30	51
Other household nonupholstered furniture	1.45	90	1.70	105	1.84	264	2.41	346	1.88	20	2.39	25	2.13	28	2.86	37
Institutional furniture	1.40	214	1.72	263	1.37	946	1.76	1,210	1.46	63	1.85	80	1.65	79	2.29	110
<i>Total --</i>		<i>1,579</i>		<i>1,933</i>		<i>7,065</i>		<i>8,966</i>		<i>453</i>		<i>577</i>		<i>574</i>		<i>795</i>
<u>Office Furniture</u>																
Wood office furniture	1.50	24	1.79	28	1.50	102	1.86	127	1.83	6	2.32	7	2.10	8	2.84	11
Custom architectural woodwork & millwork	1.46	144	1.85	183	1.38	717	1.77	924	1.42	49	1.80	63	2.34	40	3.75	64
Showcase, partition, shelving, & locker	1.33	449	1.64	553	1.36	1,687	1.80	2,244	1.36	133	1.73	169	1.49	170	2.05	235
<i>Total --</i>		<i>617</i>		<i>764</i>		<i>2,507</i>		<i>3,295</i>		<i>188</i>		<i>239</i>		<i>218</i>		<i>309</i>
<u>Other Furniture Related Products</u>																
Mattresses	1.37	276	1.60	321	1.68	823	2.18	1,063	1.90	57	2.42	73	1.95	79	2.63	107
Blind & shades	1.59	30	1.93	36	1.53	127	1.94	161	1.79	8	2.28	10	4.07	8	6.11	12
<i>Total --</i>		<i>306</i>		<i>357</i>		<i>949</i>		<i>1,224</i>		<i>65</i>		<i>83</i>		<i>87</i>		<i>119</i>
Secondary Forestry Total --		18,039		21,160		51,990		68,749		4,001		5,090		7,121		9,069
Forestry Total --		24,847		29,061		68,772		91,402		5,386		6,856		10,297		12,928

Table D.1. Total Impacts from Agriculture and Forestry^a, Tennessee, 2023

Sector	TIO (million \$)				Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
Agriculture & Forestry Total --		91,098		103,810		322,068		390,583		16,450		20,904		34,093		42,057
Construction --		\$69,892		\$93,693		371,027		498,856		\$30,063		\$38,362		\$36,068		\$50,916
Finance --		\$53,301		\$66,319		255,929		325,778		\$16,672		\$21,210		\$26,131		\$34,253
Government --		\$75,238		\$107,213		523,242		694,747		\$41,119		\$52,263		\$53,961		\$73,912
Insurance --		\$50,354		\$60,948		154,787		211,622		\$13,595		\$17,288		\$24,707		\$31,317
Manufacturing --		\$233,310		\$270,141		518,142		715,735		\$46,847		\$59,684		\$80,464		\$103,444
Mining --		\$5,151		\$6,054		15,394		20,241		\$1,155		\$1,470		\$2,181		\$2,745
Miscellaneous --		\$8,673		\$12,632		77,502		98,739		\$5,080		\$6,460		\$5,637		\$8,107
Real Estate --		\$111,182		\$124,082		317,869		377,648		\$14,021		\$17,902		\$73,900		\$81,948
Retail Trade --		\$63,844		\$83,279		472,365		576,686		\$24,752		\$31,528		\$44,694		\$56,820
Services --		\$463,180		\$623,060		2,820,806		3,679,036		\$203,397		\$259,137		\$274,952		\$374,698
Transportation --		\$40,009		\$52,517		212,446		279,574		\$15,954		\$20,314		\$21,631		\$29,435
Utilities --		\$8,554		\$9,630		8,152		13,930		\$1,364		\$1,739		\$4,321		\$4,992
Wholesale Trade --		\$86,291		\$106,828		292,104		402,288		\$26,295		\$33,453		\$49,450		\$62,262

^aTotals may not add due to rounding.

^bValues of zero are nonzero values less than 1.

^cNegative values.



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