Department of Agricultural and Resource Economics

Estimated Economic Activity for Cow-Calf Enterprise in Tennessee

April 2025
***R. Jamey Menard**, Research Leader*
***David W. Hughes**, Professor and Greever Chair in Agribusiness Development*

Key Takeaways

- The estimated economic impacts for the backward linked supply chain for raising a beef cow-calf pair in Tennessee in 2024$ is $1,827 for economic activity, $738 for labor income, and $1,065 for gross regional product.
- For the output multiplier 1.67, for each dollar spent raising a beef cow-calf pair in the state, an additional $0.67 in economic activity is generated.
- The top five industries impacted based on total economic activity output are support activities for agriculture and forestry; accounting, tax preparation, bookkeeping, and payroll services; non-depository credit intermediation and related activities; wholesale – other nondurable goods merchant wholesalers; and commercial and industrial machinery and equipment repair and maintenance.
- Nitrogen fertilizer purchases for pasture and hay represent 12 percent of the direct spending, but the 2022 state IMPLAN model indicates that virtually all the fertilizer purchased are manufactured in other states (local purchase percentage of 1.7 percent), hence the sector has little local impact.

Background

Cattle are raised in all 95 counties in Tennessee. The Tennessee beef cattle industry is comprised of different enterprises such as commercial cow-calf, stocker cattle, backgrounding, finishing, seedstock, heifer development and stocker cows (Griffith, 2022). County-level inventory for 2024[1] of all cattle and calves and beef cattle are shown in Figures 1 and 2, respectively. In 2024, Tennessee ranked 16th nationally for all cattle and calves at 1,570,000 and 12th in beef cattle at 826,000 head (USDA/NASS, 2025).

[1]The 2024 timeline data referenced in this document is for January 1, 2025.

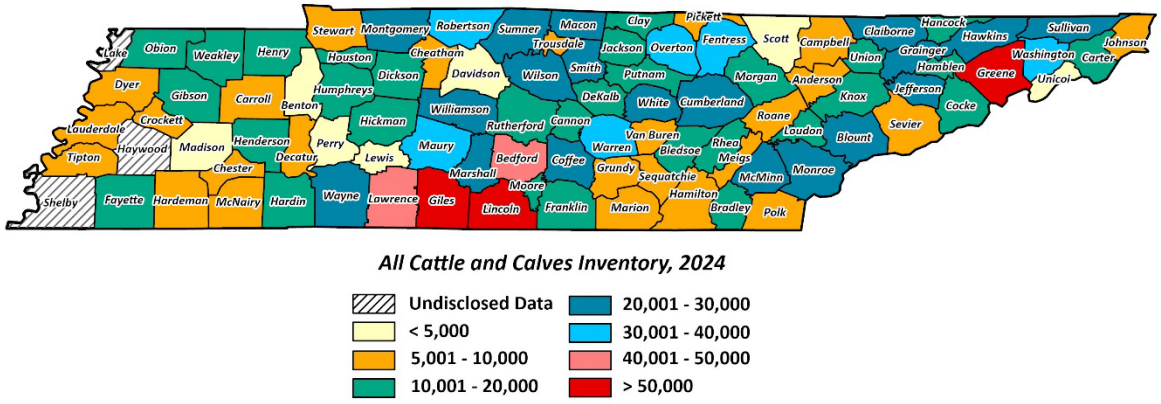

Figure 1. Location of All Cattle and Calves in Tennessee, 2024
Source: USDA/NASS, 2025

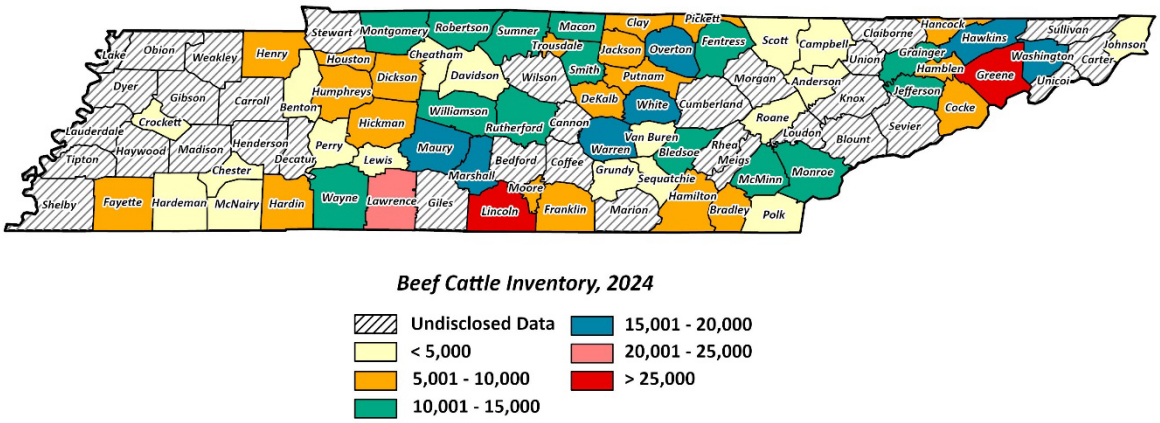

Figure 2. Location of Beef Cattle in Tennessee, 2024
Source: USDA/NASS, 2025

For Tennessee's cattle producers in 2023, cattle and calves cash receipts at $876.7 million ranked second behind soybeans ($991.3 million). Compared to other states for 2023, Tennessee ranked 22nd in cash receipts from cattle and calves (USDA/ERS, 2024). In 2023, accounting for all beef cattle production for the state, and including multiplier effects, producing beef cattle contributed an estimated $1.2 billion in economic activity. This economic activity was comprised of an estimated 27,702 individuals working part- or full-time in industries that support beef cattle farming, with a labor income of $104.7 million (IMPLAN Group, LLC, 2022).

The purpose of this analysis is to estimate the economic impacts using input-output analysis for raising a cow-calf pair based on a 50 cow-calf pair enterprise according to the University of Tennessee's most recent cow-calf budget (Griffith and Bowling, 2025). The authors conducted a similar study to estimate the economic impacts for producing one acre of non-irrigated, no-tilled corn in Tennessee based on most recent row-crop budgets (Menard and Hughes, In Press). In doing so these analyses are like the study conducted by Nadreau (2022), using the methodology developed by Willis and Holland (1997), where they converted enterprise budget data to input-output vectors for a Washington state potato study. The study investigated the current state of potato production and the role the crop's value chain plays in that state's economy. Willis and Holland (1997) developed a six-step procedure for converting farm enterprise budget data into input-output (IO) accounts using grass seed as an example. They stressed the importance of

margining[2] once the enterprise budgets were developed and transformed into a set of IO accounts, the need for margining to turn purchaser prices into producer prices, and for those industries margined, assignment to industries responsible for margining.

It is important to note that substantial variation in production practices, management decisions and cost structures exist for beef cattle production across Tennessee. Cow-calf budgets reflect an average cost structure across the state and are developed to assist producers in developing budgets that are reflective of their individual circumstances. IMPLAN's cloud platform using 2022 data is used to generate the estimated economic impacts for this analysis. Budget expenditures are assigned to one or more of IMPLAN's 546 industries, which are based on the North American Industry Classification System (NAICS). The budget expenditures by cattle producers for goods and services, land, labor, capital equipment and other materials enhance Tennessee's economy. In addition to IMPLAN describing a regional economy (e.g., Tennessee), it can be used for predictive purposes by providing multiplier-based estimates.

Model output includes descriptive metrics of the economy such as total industry output (a measure of economic activity), labor income and total value added. Total industry output (TIO) is defined as the value of production by industry per year. Labor income (LI) is defined as employee compensation (pay plus the value of certain benefits) and proprietor (owner-operator) income.[3] Total value added (TVA) or gross regional product 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 business from individuals. It is equivalent to a state's gross regional product (GRP), which is analogous to gross domestic product for the entire U.S.

Tennessee Cow-Calf Enterprise Budget

The estimated variable and fixed costs for the cow-calf enterprise budget are detailed in Table 1. Assumptions used to determine prices and quantities are footnoted at the end of the table. Variable and fixed costs are estimated at $816.36 and $347.69 per cow-calf pair, respectively, which total to $1,164.06. Pasture and hay production (e.g., seed, fertilizer and chemicals) and labor comprise the largest portion of the variable costs. The reader should note that this example does not include expenses for hay purchases, artificial insemination, land rental and any purchased heifers.

Table 1. Cow-Calf Enterprise Budget Expenditures for Tennessee, 2025*

Category	Unit	Quantity	$/Unit	Price	Total ($/cow-calf)
Variable Costs					
Pasture Production	acre	2		$145.57[a]	$291.14
-Prorated Establishment Costs[b]	*acre*	*1*	$40.00	*$40.00*	$80.00

[2]"Margins allow for purchases from retail and wholesale industries to be appropriately allocated among the retailer, wholesaler, transporters and produce of the good in question, thereby correctly attributing the appropriate portion of the good's sale price among all actors involved in bringing the good to the customer" (IMPLAN, 2023). By doing so, transactions flow directly from producer to consumer with transportation and trade treated as pass through industries (Miller and Blair, 2022).
[3]While employment is usually reported, the impact of one cow-calf pair on employment is quite small so it is not reported in this analysis.

Table 1. Cow-Calf Enterprise Budget Expenditures for Tennessee, 2025*

Category	Unit	Quantity	$/Unit	Price	Total ($/cow-calf)
-Nitrogen	*lb*	*60*	$0.60	*$36.00*	$72.00
-Phosphorous	*lb*	*30*	$0.57	*$17.10*	$34.20
-Potassium	*lb*	*30*	$0.38	*$11.40*	$22.80
-Fertilizer Application	*acre*	*1*	$11.00	*$11.00*	$22.00
-Lime	*ton*	*0.2*	$50.00	*$10.00*	$20.00
-Lime Application	*acre*	*0.2*	$12.00	*$2.40*	$4.80
-Herbicide	*acre*	*1*	$7.00	*$7.00*	$14.00
-Herbicide Application	*acre*	*1*	$10.67	*$10.67*	$21.34
Hay Production	acre	0.90		$224.57[c]	$202.11
-Prorated Establishment Costs[d]	*acre*	*1*	$40.00	*$40.00*	$36.00
-Nitrogen	*lb*	100	$0.60	*$60.00*	$54.00
-Phosphorous	*lb*	*30*	$0.57	*$17.10*	$15.39
-Potassium	*lb*	*30*	$0.38	*$11.40*	$10.26
-Fertilizer Application	*acre*	*1*	$11.00	*$11.00*	$9.90
-Lime	*ton*	*0.2*	$50.00	*$10.00*	$9.00
-Lime Application	*acre*	*0.2*	$12.00	*$2.40*	$2.16
-Herbicide	*acre*	*1*	$7.00	*$7.00*	$6.30
-Herbicide Application	*acre*	*1*	$10.67	*$10.67*	$9.60
-Mowing	*acre*	*1*	$17.50	*$17.50*	$15.75
-Teddering	*acre*	*1*	$9.50	*$9.50*	$8.55
-Raking	*acre*	*1*	$9.00	*$9.00*	$8.10
-Baling	*acre*	*1*	$14.00	*$14.00*	$12.60
-Moving/Hauling	*acre*	*1*	$5.00	*$5.00*	$4.50
Bull (Pasture & Hay)[e]	$	1.7		$493.25	$33.54
Supplemental Feed[f]	head	1		$26.78	$26.78
Salt & Mineral	lb	91		$0.46	$41.98
Veterinary & Medicine[g]	head	1		$33.09	$33.09
Other Expenses[h]	head	1		$1.50	$1.50
Labor	hours	8		$15.00	$120.00
Interest	$	$750.14[i]		7.0%	$26.25
Marketing[j]	head	0.86		$46.48	$39.97
			Total Variable Expenses:		***$816.36***
Fixed Costs					
Livestock Facilities & Equip[k]	head	1		$71.09	$71.09
Pasture & Hay Machinery/Equip[l]	head	1		$223.16	$223.16

Table 1. Cow-Calf Enterprise Budget Expenditures for Tennessee, 2025*

Category	Unit	Quantity	$/Unit	Price	Total ($/cow-calf)
Purchased Breeding Stock[m]	head	1		$29.91	$29.91
Miscellaneous Overhead[n]	head	1		$235.29	$23.53
				Total Fixed Expenses:	***$347.69***
				Total Variable & Fixed Expenses:	***$1,164.06***

*This example does not account for expenses associated with hay purchases, artificial insemination, land rental and purchased heifers (not bred).

[a]$/cow-calf cost items in italics below for pasture production sum to $145.57.

[b]The percentage share of variable and fixed expenses used for the prorated pasture establishment costs are derived from cool-season grass/clover, fescue budget on page 6 in the publication titled "2025 Tennessee Pasture Budgets" by Bilderback, Bowling, Painter, and Pedreira, 2025.

[c]$/cow-calf cost items in italics below for hay production sum to $224.57.

[d]The percentage share of variable and fixed expenses used for the prorated hay establishment costs are derived from cool-season grass/clover, fescue round bale budget on page 12 in the publication titled "2025 Tennessee Hay Budgets" by Bilderback, Bowling, Painter, and Pedreira, 2025.

[e]Accounts for bull pasture and hay costs on a yearly basis and assumes costs are 1.7 times higher than a cow-calf.

[f]14 percent commercial feed.

[g]Vaccines, deworming, fly tags, implants and breeding soundness exam for bull.

[h]Identification tags

[i]Sum of variable expenses (total $/cow-calf) for pasture & hay production, bull (pasture & hay), supplemental feed, salt & mineral, veterinary and medicines and other expenses.

[j]Commissions, yardage, check-off, insurance and hauling.

[k]Depreciation, interest, insurance, property taxes and repairs for hay barn, corral and chute/head gate and fencing.

[l]Depreciation, interest, insurance, property taxes and repairs for tractor, disc mower, hay rake, hay baler, hay wagon, rotary mower, tractor mounted sprayer and truck.

[m]Accounts for annual depreciation and interest on purchased breeding stock (cows and bulls).

[n]Assumed to be 10 percent of total overhead costs to account for unforeseen costs associated with overhead.

Assigning the Cow-Calf Enterprise Budget Expenditures to IMPLAN Sectors

The enterprise budget cost categories, along with the IMPLAN sectors assigned and their general description, plus the NAICS description indicating the reason that IMPLAN sector was chosen, are detailed in Table 2. The livestock forage budget expenditures for hay/pasture seed, fertilizer, lime and chemicals were margined, plus the cow-calf pair's requirements for supplemental feed, salt and minerals and identification tags (Other Expenses). The IMPLAN sectors used for margining are indicated in italics under the NAICS description. Approximately 80 percent of the budget expenditure for each particular cost category that was margined was distributed to the various assigned IMPLAN sectors in italics. The costs for applying the inputs, 20 percent, were assigned to IMPLAN sector 19 (Support Activities for Agriculture and Forestry). As an example, for lime the budget expenditure (Table 1) was $30.97 per acre.[4] For that value, 20 percent ($6.19) was allocated to sector 19, whereas 80 percent ($24.78) was margined and distributed across IMPLAN sectors 208 (lime manufacturing) and 396 (wholesale services – other durable goods merchant wholesalers). A small share of the cost categories margined were assigned to

[4]Comprises $20 for pasture production, $9.00 for hay production, and $1.97 for bull's pasture and hay.

various transportation sectors (e.g., air, rail, truck, and water). The remaining variable and fixed expenses are detailed in Table 2.

Table 2. Cow-Calf Expenditures for Tennessee Mapped to IMPLAN Sector

Cost Categories	Sector	Sector Description	NAICS Description
Hay/Pasture Seed[a,b]	10	All Other Crop Farming	Grass & hay farming, grass & hay seed farming (*all other crop farming (sector 10)*)
Fertilizers[a]	19 (20%) & 400 (80%)	Support Activities for Agriculture/Forestry; Wholesale – Other Nondurable Goods Merchant Wholesalers	Fertilizer application for crops; Fertilizer & fertilizer materials merchant wholesalers (*nitrogen fertilizer (sector 167) and wholesale services – other nondurable goods merchant wholesalers (sector 400)*)
Lime[a]	19 (20%) & 396 (80%)	Support Activities for Agriculture/Forestry; Wholesale – Other Nondurable Goods Merchant Wholesalers	Spreading lime for crops; Lime, agricultural, merchant wholesalers (*lime (sector 208) and wholesale services – other durable goods merchandise merchant wholesalers (sector 396)*)
Chemicals[a]	19 (20%) & 400 (80%)	Support Activities for Agriculture/Forestry; Wholesale – Other Nondurable Goods Merchant Wholesalers	Crop dusting & spraying; Herbicides merchant wholesalers (*pesticides and other agricultural chemicals (sector 170) and wholesale services – other nondurable goods merchant wholesalers (sector 400)*)
Bull (Pasture & Hay)	*Expenditure categories same as pasture & hay costs for cow-calf*		
Supplemental Feed[a]	405	Retail – Building Materials & Garden Equipment & Supplies Stores	Farm supply stores *(other animal food manufacturing (sector 64) and retail – building materials & garden equipment & supplies stores (405))*
Salt & Mineral[a]	405	Retail – Building Materials & Garden Equipment & Supplies Stores	Farm supply stores *(pharmaceutical preparation manufacturing (172) and retail – building materials & garden equipment & supplies stores (405))*
Veterinary & Medicines	467	Veterinary Services	Livestock veterinary services
Other Expenses[a]	405	Retail – Building Materials & Garden Equipment & Supplies Stores	Farm supply stores *(other plastic product manufacturing (193) and retail – building materials & garden equipment & supplies stores (405))*
Labor	19	Support Activities for Agriculture/Forestry	Farm labor contractors
Interest	439	Non-depository Credit Intermediation & Related Activities	Agricultural credit institutions, making loans or extending credit; Agricultural lending

Table 2. Cow-Calf Expenditures for Tennessee Mapped to IMPLAN Sector

Cost Categories	Sector	Sector Description	NAICS Description
Marketing (Commission)	400	Wholesale – Other Nondurable Goods Merchant Wholesalers	Auction markets, livestock (except horses, mules)
Marketing (Yardage)	400	Wholesale – Other Nondurable Goods Merchant Wholesalers	Auction markets, livestock (except horses, mules)
Marketing (Check-off)	523	Business & Professional Associations	Agricultural organizations; farmers' associations
Marketing (Insurance)	444	Insurance Carriers, except Direct Life	Agricultural (i.e., crop, livestock) insurance carriers, direct
Marketing (Hauling)	417	Truck Transportation	Livestock trucking/hauling, local
Livestock Facilities Equipment and Pasture & Hay Machinery & Equipment (Interest)	439	Non-depository Credit Intermediation & Related Activities	Agricultural credit institutions, making loans or extending credit; Agricultural lending
Livestock Facilities Equipment and Pasture & Hay Machinery & Equipment (Insurance)	444	Insurance Carriers, except Direct Life	Agricultural (i.e., crop, livestock) insurance carriers, direct
Livestock Facilities Equipment and Pasture & Hay Machinery & Equipment (Depreciation)	456	Accounting, Tax Preparation, Bookkeeping, & Payroll Services	Certified accountants' offices
Livestock Facilities Equipment and Pasture & Hay Machinery & Equipment (Repairs)	515	Commercial & Industrial Machinery & Equipment Repair & Maintenance	Agricultural machinery & equipment repair & maintenance services
Livestock Facilities Equipment and Pasture & Hay Machinery & Equipment (Property Taxes)	534	Other Local Government Enterprises	N/A
Purchased Breeding Stock	11	Beef Cattle Farming	N/A
Miscellaneous Overhead (Interest)	439	Non-depository Credit Intermediation & Related Activities	Agricultural credit institutions, making loans or extending credit; Agricultural lending

Table 2. Cow-Calf Expenditures for Tennessee Mapped to IMPLAN Sector

Cost Categories	Sector	Sector Description	NAICS Description
Miscellaneous Overhead (Depreciation)	456	Accounting, Tax Preparation, Bookkeeping, & Payroll Services	Certified accountants' offices

[a]For margined expenditure categories (e.g., hay seed, fertilizer, lime, and chemicals), a small share of the costs were assigned to various transportation sectors (e.g., air, rail, water, and truck).

[b]Seed from prorated establishment costs for pasture and hay.

IMPLAN Shock Vector for Cow-Calf

Based on the per cow-calf pair expenditure information in Table 1 and their assigned IMPLAN sectors from Table 2, a rollup of the IMPLAN shock vector is shown in Table 3. The table displays the various transportation sectors in the shock vector (*see footnote 2 discussing the importance of including transportation when margining*). IMPLAN's local purchase percentage (LPP) option is used in this analysis, which affects the direct impact value applied to the multipliers. Instead of a 100 percent direct expenditure value for each respective expenditure budget category applied to the multiplier the model is set to the social accounting matrix value, or regional purchase coefficient (RPC), which is normally less than 100 percent.[5] The direct cow-calf expenditures total to $1,164.06.

Table 3. IMPLAN Shock Vector for Cow-Calf Expenditures by Assigned IMPLAN Sector (2024$)

Sector	Description	Expenditure ($/cow-calf)	Expenditure Category	Local Purchase Percentage
10	All Other Crops	$14.19	1.2%	38.4%
11	Beef Cattle Farming	$29.91	2.6%	100.0%
19	Support Activities for Agriculture/Forestry	$370.14	31.8%	100.0%
64	Other Animal Food Manufacturing	$15.65	1.3%	32.5%
167	Nitrogen Fertilizer	$139.23	12.0%	1.7%
170	Pesticides & Other Agricultural Chemicals	$15.73	1.4%	67.4%
172	Pharmaceutical Preparation Manufacturing	$24.54	2.1%	0.6%
193	Other Plastic Products Manufacturing	$0.88	0.1%	10.5%
208	Lime Manufacturing	$19.61	1.7%	65.3%
396	Wholesale Services – Other Durable Goods Merchandise Merchant Wholesalers	$2.37	0.2%	82.1%
400	Wholesale – Other Nondurable Goods Merchant Wholesalers	$96.60	8.3%	83.2%
405	Retail – Building Material & Garden Equipment & Supplies Stores	$29.18	2.5%	98.7%

[5]The RPC indicates what proportion of the local demand for that commodity is supplied by local production. An RPC of 0.50 for a given commodity means for each $1 of local need, 50 percent will be purchased from local producers. For nitrogen fertilizer in Table 3, the LPP or RPC is 1.7 percent. So, for every $1 of local need only 1.7 percent will be purchased locally.

Table 3. IMPLAN Shock Vector for Cow-Calf Expenditures by Assigned IMPLAN Sector (2024$)

Sector	Description	Expenditure ($/cow-calf)	Expenditure Category	Local Purchase Percentage
414	Air Transportation Services	$0.19	0.02%	37.1%
415	Rail Transportation Services	$5.99	0.5%	72.5%
416	Water Transportation Services	$0.04	0.004%	88.4%
417	Truck Transportation Services	$14.24	1.2%	99.3%
439	Non-depository Credit Intermediation & Related Activities	$114.34	9.8%	88.5%
444	Insurance Carriers, except Direct Life	$10.36	0.9%	64.9%
456	Accounting, Tax Preparation, Bookkeeping, & Payroll Services	$174.79	15.0%	92.7%
467	Veterinary Services	$33.09	2.8%	99.9%
515	Commercial & Industrial Machinery & Equipment Repair & Maintenance	$44.80	3.8%	94.9%
523	Business & Professional Associations	$1.29	0.1%	79.9%
534	Other Local Government Enterprises	$6.89	0.6%	83.4%
	Total*	***$1,164.06***	***100.0%***	

*Total may not add due to rounding.

The results are indicated in Table 4. The estimated economic impacts for the backward linked supply chain for raising a cow-calf pair in Tennessee in 2024$ is $1,827 for economic activity, $738 for labor income and $1,065 for gross regional product. The output multiplier is 1.67. For each dollar spent raising a cow-calf in the state, an additional $0.67 in economic activity is generated. The top five industries impacted based on total economic activity output are support activities for agriculture and forestry; accounting, tax preparation, bookkeeping and payroll services; non-depository credit intermediation and related activities; wholesale – other nondurable goods merchant wholesalers; and commercial and industrial machinery and equipment repair and maintenance. The reader may be surprised that purchased inputs do not have a larger impact. Nitrogen fertilizer purchases for livestock forage production represent 12

Table 4. Estimated Economic Impacts for a Cow-Calf Enterprise in Tennessee (2024$)

Category	Labor Income	Gross Regional Product	Total Industry Output
Direct[1]	$493	$645	$1,092[5]
Indirect[2]	$88	$139	$267
Induced[3]	$157	$281	$468
Total[4]	***$738***	***$1,065***	***$1,827***

[1]Direct effects are those attributable to the actual enterprise budget expenditures in Tennessee.
[2]Indirect effects are those attributable to the input supplying businesses (e.g., expenditures on raw materials, supplies, and other operating expenses).
[3]Induced effects are created as the new income generated by the direct and indirect effects is spent and re-spent within the region.
[4]Total is the sum of the direct, indirect, and induced effects.
[5]Because of margining and using the model's LPP, the direct value will not total to $1,164.06.

percent of the direct spending, but the 2022 state IMPLAN model indicates that virtually all the fertilizer purchased are manufactured in other states (local purchase percentage of 1.7 percent), hence the sector has very little local impact.

Conclusion

This analysis provides estimates regarding the economic impact of raising a cow-calf pair based on the University of Tennessee Extension 2025 cow-calf budget. For a direct impact of $1,164 for raising a cow-calf pair, the total estimated economic activity per cow-calf pair is $1,827, $738 for labor income and $1,065 for gross regional product. Some of the more common input purchases for forage production such as seed, nitrogen fertilizers, pesticides and other agricultural chemicals, lime, plus supplemental feed for the cow-calf pair may not be manufactured entirely within state but outside the state's boundaries thereby influencing the magnitude of the economic activity for raising beef cattle. The analysis also discusses the need for margining to turn purchaser prices from retail and wholesale industries into producer prices. For those industries margined, it is important to allocate the final sale price to the consumer to those industries responsible (e.g., retailer, wholesaler, transporter, etc.) in the supply chain.

References

Bilderback, D., B. Bowling, R. Painter, and B. Pedreira. 2025. "2025 Tennessee Hay Budgets." University of Tennessee Extension, Department of Agricultural and Resource Economics. D 252-C. Available at arec.tennessee.edu/extension/budgets/.

Bilderback, D., B. Bowling, R. Painter, and B. Pedreira. 2025. "2025 Tennessee Pasture Budgets." University of Tennessee Extension, Department of Agricultural and Resource Economics. D 252-D. Available at arec.tennessee.edu/extension/budgets/.

Griffith, A. 2022. "Cattle Businesses: Which One is Right for Me?" University of Tennessee Extension, Department of Agricultural and Resource Economics. W1062. Available at https://tiny.utk.edu/W1062.

Griffith, A., and B. Bowling. 2025. "Cow/Calf Budget for 2025." University of Tennessee Extension, Department of Agricultural and Resource Economics. D31. Available at arec.tennessee.edu/extension/budgets/.

IMPLAN Group LLC, IMPLAN System (2022 data and Cloud Platform V. 7.0 software), 16905 Northcross Dr., Suite 120, Huntersville, NC 28078. Available at implan.com.

IMPLAN, 2023. "Margin Data Sources." Available at https://support.implan.com/hc/en-us/articles/21603048864667-Margin-Data-Sources.

Menard and Hughes, 2024. "Estimated Economic Activity from Producing One Acre of Non-Irrigated, No-Tilled Corn in Tennessee." Forthcoming (In Press)

Miller, R.E. and P.D. Blair, 2022. Input-Output Analysis: Foundations and Extensions. 3rd ed. Prentice-Hall Inc.: Engelwood Cliffs, NJ.

Nadreau, T. 2022. "Washington State Potato Contributions: Economic Activity and Production Constraints." A report by Washington State University's IMPACT Center. Available at wpcdn.web.wsu.edu/cahnrs/uploads/sites/6/WSPC_Final_v1.pdf.

U.S. Department of Agriculture, Economic Research Service (ERS). 2024. Data Files: U.S. and State-Level Farm Income and Wealth Statistics. "Annual Cash Receipts by Commodity,

U.S. and States, 2008-2023F." Available at ers.usda.gov/data-products/farm-income-and-wealth-statistics/data-files-u-s-and-state-level-farm-income-and-wealth-statistics.

U.S. Department of Agriculture, National Agricultural Statistics Service (NASS). 2025. "Quick Stats Tools." Available at nass.usda.gov/Quick_Stats.

Willis, D. and D. Holland. 1997 "Translating Farm Enterprise Budgets into Input-Output Accounts: Another Example from Washington State." Department of Agricultural Economics, Washington State University.

UTIA.TENNESSEE.EDU

Real. Life. Solutions.™

D 259 04/25 25-0430 Programs in agriculture and natural resources, 4-H youth development, family and consumer sciences, and resource development. University of Tennessee Institute of Agriculture, U.S. Department of Agriculture and county governments cooperating. UT Extension provides equal opportunities in programs and employment.