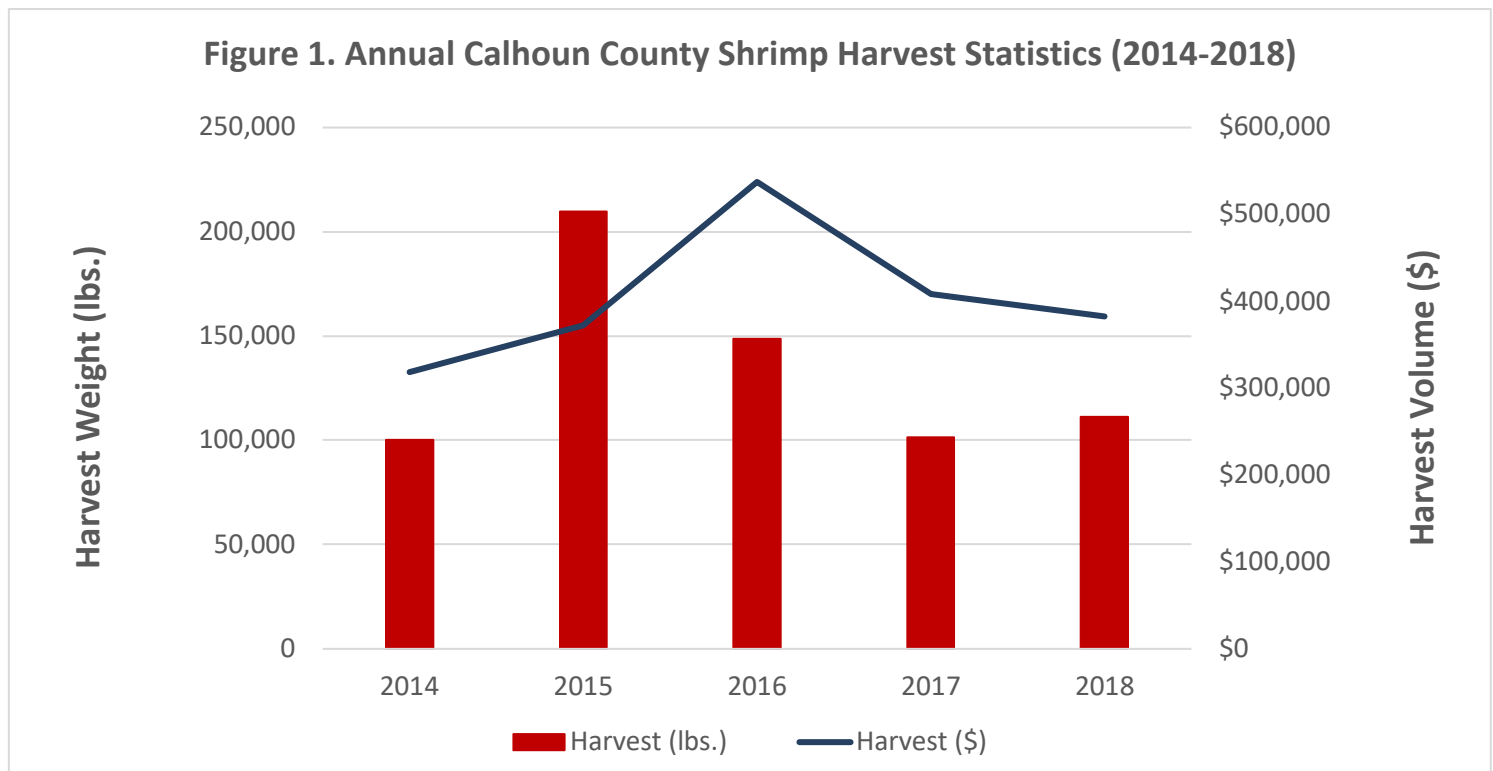


Economic Impacts of the Calhoun County Shrimp Fishery

Rebekka Dudensing¹, Laura Picariello², Tony Resinger³, and Daniel Hanselka⁴

The Calhoun County shrimp fishery is an important part of the Calhoun County economy and the Texas shrimp industry. Shrimp harvesting and processing an important part of the Texas marine economy. Between 2014 and 2019, Calhoun County's shrimp harvest accounted for 0.3% of the total Texas shrimp harvest by weight and 0.2% of the total Texas shrimp harvest by value (Figure 1).



Economic impacts of dockside and processing revenues were calculated for three scenarios: 1) the best year, 2) an average year (average of the six years), and 3) the worst year. These scenarios account for the substantial variability in annual harvests and revenues (see Figure 1).

Four types of impacts are estimated: employment (number of jobs due to the shrimp fishery), labor income (combined income of those employed as a result of the shrimp fishery), value added (the shrimp fishery's contribution to GDP), and output (the effect of shrimp fishery direct spending on overall economic activity).

In an average year the Calhoun County shrimp fishery contributes approximately \$423 thousand to the county economy and 8.7 part- and full-time jobs (Table 1). In an average year, the county's shrimp processing sector contributes \$75 thousand and 0.3 part- and full-time jobs to the local economy (Table 2). Labor income is a component of value added, which is a component of output, so these figures cannot be summed. Average employment is greater than employment in the best year because jobs are calculated based on the number of

¹ Associate Professor and Extension Economist, Texas A&M AgriLife Extension Service, College Station, TX

² Fisheries Specialist, Texas Sea Grant, College Station, TX

³ Cameron County Extension Agent, Texas A&M AgriLife Extension Service, San Benito, TX

shrimping vessels and dockside pounds. The best year based on dockside value was not year with the largest harvest by weight due to variations in price.

Table 1. Dockside Impacts for Calhoun County

Best Year Impacts				
Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	13.7	\$287,400	\$536,400	\$537,400
Total Effect	13.9	\$294,100	\$550,600	\$563,300
Average Year Impacts				
Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	8.6	\$180,700	\$402,900	\$403,700
Total Effect	8.7	\$185,700	\$413,600	\$423,100
Poorest Year Impacts				
Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	5.4	\$114,400	\$317,800	\$318,400
Total Effect	5.5	\$118,400	\$326,200	\$333,700
Economic impact values are not additive across measures (employment, labor income, value added, and output).				

Table 2. Processing Impacts for Calhoun County

Best Year Impacts				
Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	0.3	\$8,900	\$15,600	\$93,500
Total Effect	0.4	\$15,300	\$30,300	\$117,900
Average Year Impacts				
Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	0.2	\$5,700	\$10,000	\$59,800
Total Effect	0.3	\$9,800	\$19,400	\$75,400
Poorest Year Impacts				
Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	0.1	\$4,200	\$7,400	\$44,600
Total Effect	0.2	\$7,300	\$14,400	\$56,200
Economic impact values are not additive across measures (employment, labor income, value added, and output).				

Analysis Notes

- Annual shrimp landings data (amount and value) were provided by NOAA Fisheries; landings (weight) are measured in headless pounds.
- Statewide direct employment was calculated by assuming five workers per federally permitted vessel and three workers per state permitted vessel (NOAA, 2020b), and county jobs were estimated based on the county's share of Texas harvest by weight.
- Direct labor income is based on 2015-2019 average Texas wages for "Forestry, fishing, and related activities" reported by the Bureau of Economic Analysis.
- Economic impacts were calculated using IMPLAN (2019), a software program that calculates economic impacts using classic input-output analysis.
- Fishing impacts were calculated using 2017 IMPLAN sector 17 and wage compensation (sector 5001) multipliers using the analysis-by-parts method.
- Processing impacts were calculated using 2017 IMPLAN sector 93 multipliers

References

Bureau of Economic Analysis. 2021. 2015-2019 Compensation of Employees by NAICS Industry, Table CAINC6N. <https://www.bea.gov/data>.

Bureau of Economic Analysis. 2021. 2015-2019 Total Full-Time and Part-Time Employment by NAICS Industry, Table CAEMP25N. <https://www.bea.gov/data>.

IMPLAN Group, LLC. 2019. 2017 data and software, <http://www.implan.com/>.

NOAA, National Marine Fisheries Service. 2020a. Landings data.

NOAA, National Marine Fisheries Service. 2020b. Federally permitted vessels data.

Publication supported in part by an Institutional Grant (NA18OAR4170088) to the Texas Sea Grant College Program from the National Sea Grant Office, National Oceanic and Atmospheric Administration, U.S. Department of Commerce.
TAMU-SG-21-507 April 2021