Mississippi MarketMaker Newsletter

MISSISSIPPI STATE UNIVERSITY EXTENSION

MARKET POTENTIAL FOR FLORIDA POMPANO AQUACULTURE

ABSTRACT

This newsletter attempts to develop an approach to assessing the market potential of Florida Pompano for aquaculture. Florida pompano is a prominent menu item at several high-end restaurants on the U.S. East Coast and the Gulf of Mexico. Several decades of research and development have developed protocols for the commercial aquaculture of Florida Pompano. This paper presents Florida Pompanos' long-term commercial landings and dockside values in the United States and by major producing states.

KEYWORDS

Market potential, Florida Pompano, Marine aquaculture.

SUGGESTED CITATION

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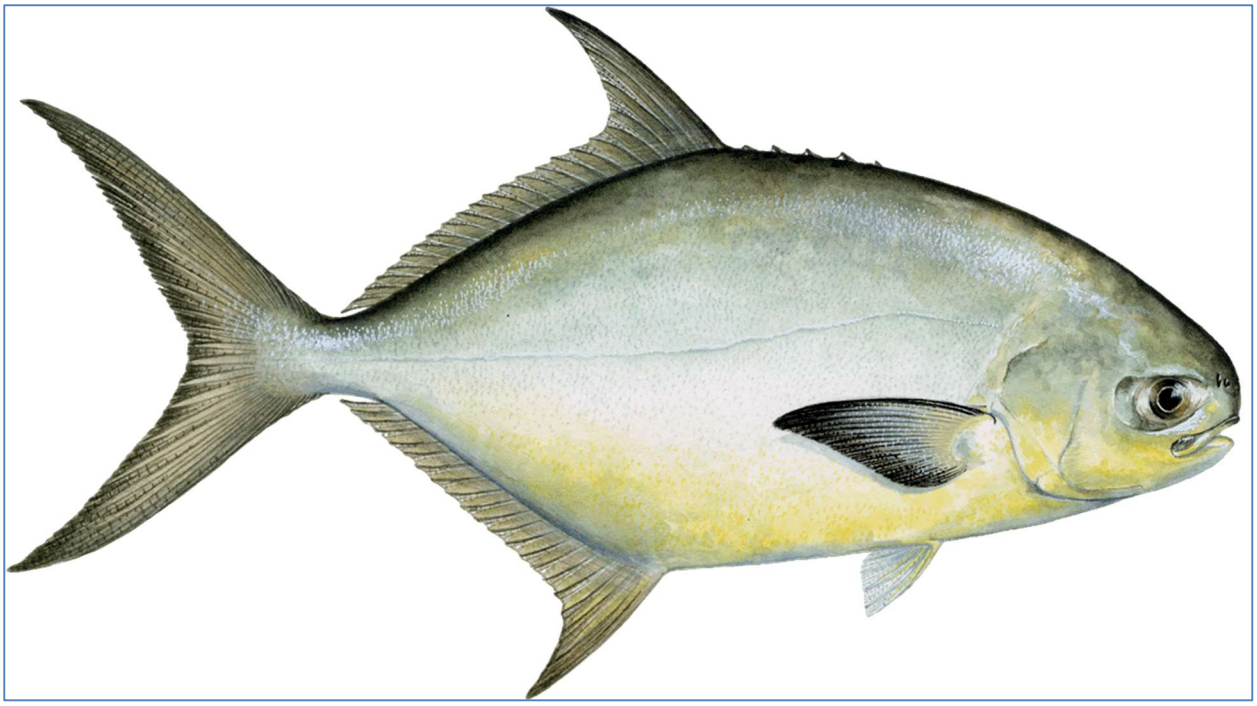
FLORIDA POMPANO

Scientific name: *Tachinotus carolinus.*

Source: https://www.seafoodwatch.org/recommendation/pompano/florida-pompano-31969.

- Common names: Koban Aji, Pompano, Koban aji
- Florida pompano caught in the U.S. Atlantic with cast nets is a Good Alternative. The stock status and fishing impacts are unknown.
- Moderately effective management includes measures regulating the catch of Florida pompano, but their effectiveness is unknown because the stock hasn't been assessed in more than ten years.
- The bycatch of other species is very low to nonexistent, and seafloor impacts are minimal. The fishery's impact on the ecosystem hasn't been assessed, but food web impacts are unlikely.



- Source: https://www.seafoodwatch.org/recommendation/pompano/florida-pompano-31969.

- Florida pompano is a prominent menu item at several high-end restaurants on the U.S. East Coast and the Gulf of Mexico.
- Several decades of research and development have developed protocols for the commercial aquaculture of Florida Pompano.
- Source: https://coastalscience.noaa.gov/news/noaa-identifies-florida-pompano-as-commercially-ready-for-u-s-marine-aquaculture/.

STATUS OF FLORIDA POMPANO AQUACULTURE

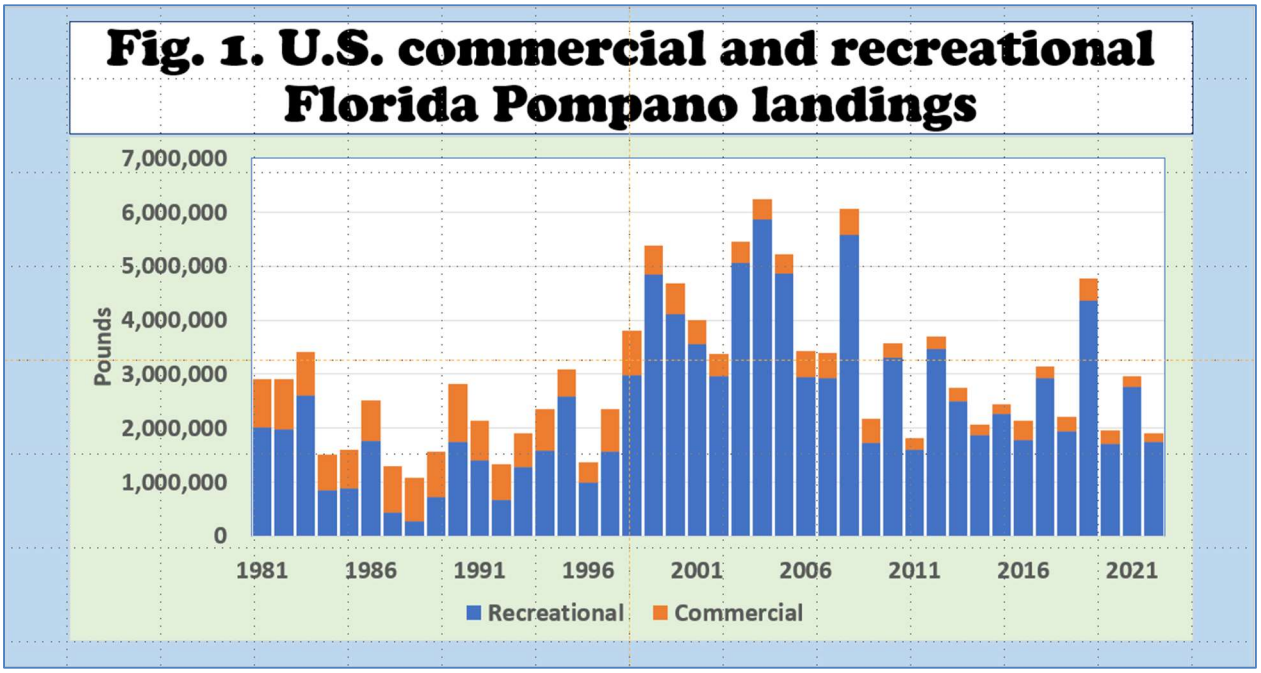
- A few US-based commercial ventures with operations in Florida and Central America produce pompano juveniles and marketable fish.
- To expand the success of these existing businesses as well as to ensure sustainable industry development, there is an ongoing need for research directed towards topics including:
    - Domesticated broodstock development, selective breeding, and genetic improvement
    - Diet development and refinement for grow-out.
    - Disease management strategies.
    - Economics and business planning.
    - Marketing strategies.
- Source: https://www.was.org/MeetingAbstracts/ShowAbstract/136356.

LET US START OUR MODELING EFFORT!

- The commercial landings and dockside values of Florida Pompano in the United States since 1950 were compiled from the NOAA Fisheries website.
- Major producing states were identified, and shifts in landings were measured.
- Nominal dockside prices ($/lb) are imputed from commercial landings (lb/yr) and dockside values ($/yr).
- Empirical commercial landings and dockside price models are developed, identifying significant determinants.

U.S. COMMERCIAL AND RECREATIONAL FLORIDA POMPANO LANDINGS

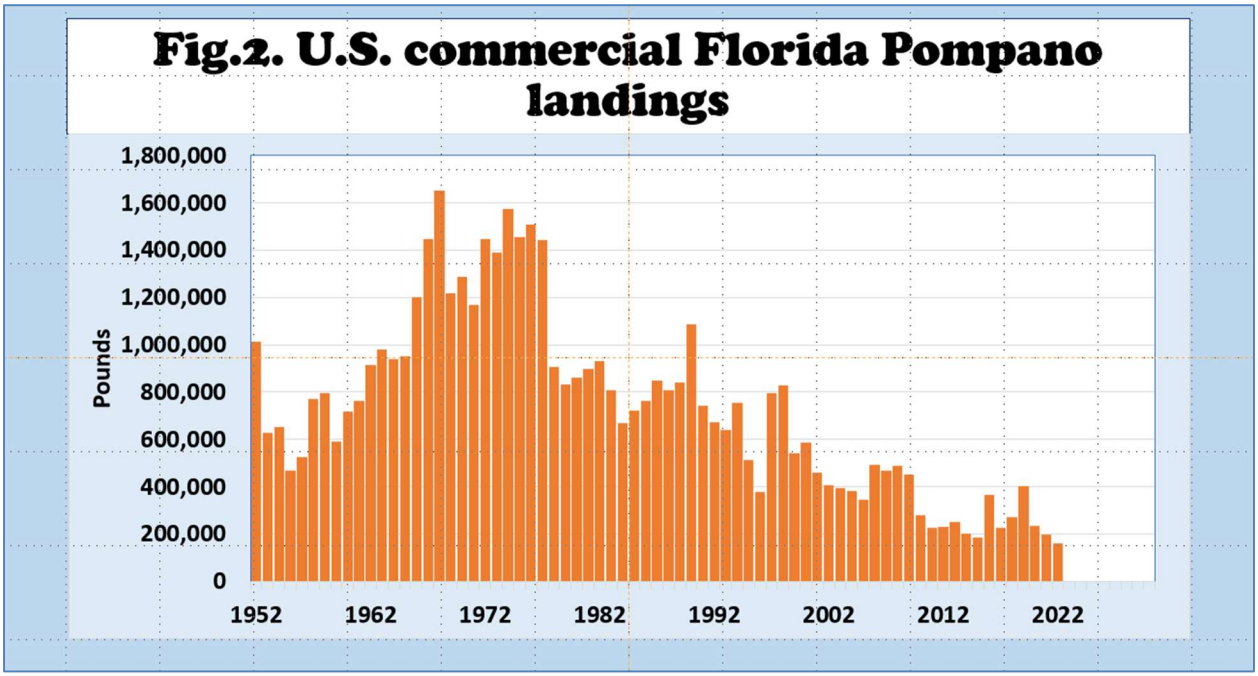
- In Fig. 1, NOAA Fisheries data show commercial and recreational landings of Florida Pompano in the U.S. since 1981.



- Combined landings peaked in 2004 at more than 6.2 million pounds.
- Recreational landings contributed to an average of 90% of total landings since 2000.

U.S. COMMERCIAL FLORIDA POMPANO LANDINGS

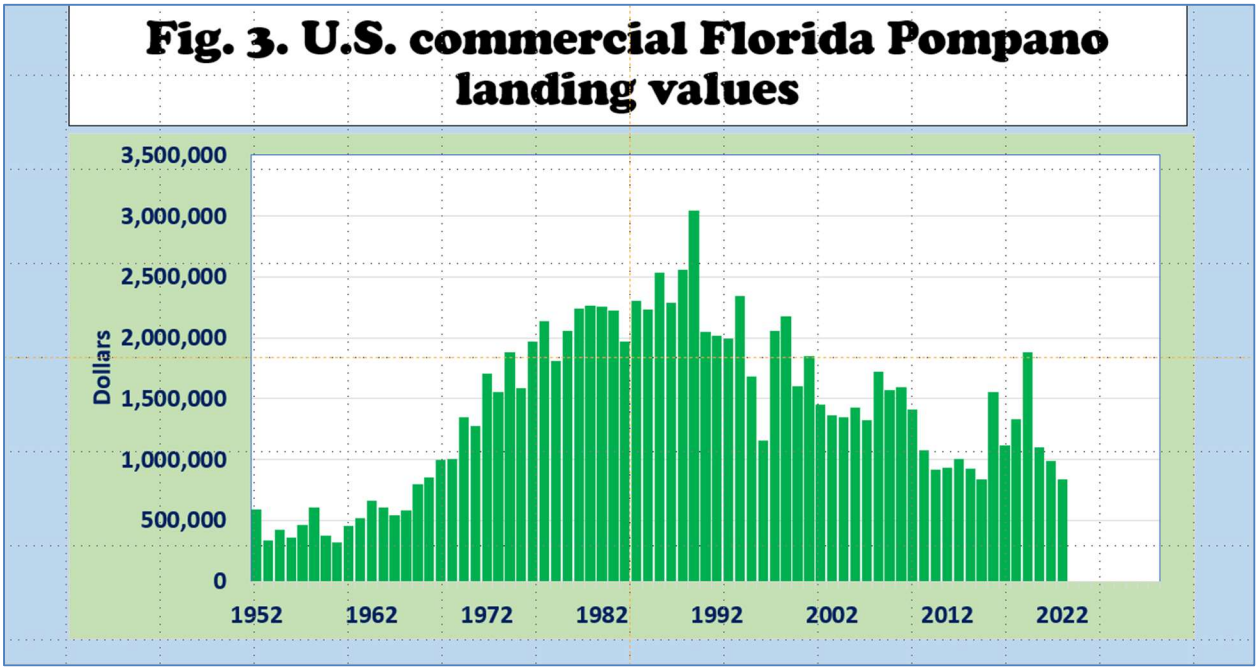
- Fig. 2 shows NOAA Fisheries data on commercial landings of Florida Pompano in the U.S. since 1950.



- Commercial landings peaked in 1968 at over 1.6 million pounds.
- Commercial landings contributed an average of 10% of total landings since 2000.
- Since 2010, commercial landings have continued to fall, averaging 240,000 pounds per year.

U.S. COMMERCIAL FLORIDA POMPANO LANDING VALUES

- Fig. 3. shows NOAA Fisheries data on commercial landing values of Florida Pompanos in the U.S. since 1950.

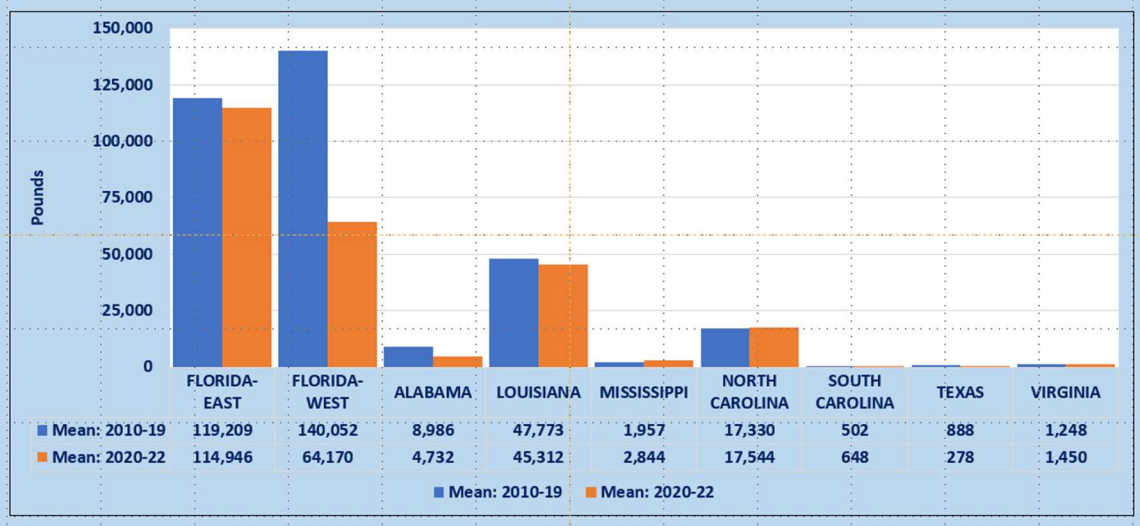


- Commercial landing values peaked in 1990 at more than $3,000,000.
- Commercial landing values have averaged more than $1,000,000 since 2010.

U.S. COMMERCIAL FLORIDA POMPANO LANDINGS BY STATE

- As Fig. 4 shows, the major producing states are Florida's East Coast, Florida's West Coast, North Carolina, and Louisiana.

Fig. 4. U.S. commercial Florida Pompano landings by state and pounds



U.S. ATLANTIC REGION COMMERCIAL FLORIDA POMPANO LANDINGS

- As Fig. 4 and 5 show, the Florida East Coast produced almost 120,000 lb/yr from 2010 to 2019. Its share of total U.S. landings rose from 45% in 2010-19 to 59% in 2020-22.
- North Carolina landed more than 17,000 lb/yr in 2010-19. Its share of total U.S. landings

Fig. 4. U.S. commercial Florida Pompano landings by state and pounds

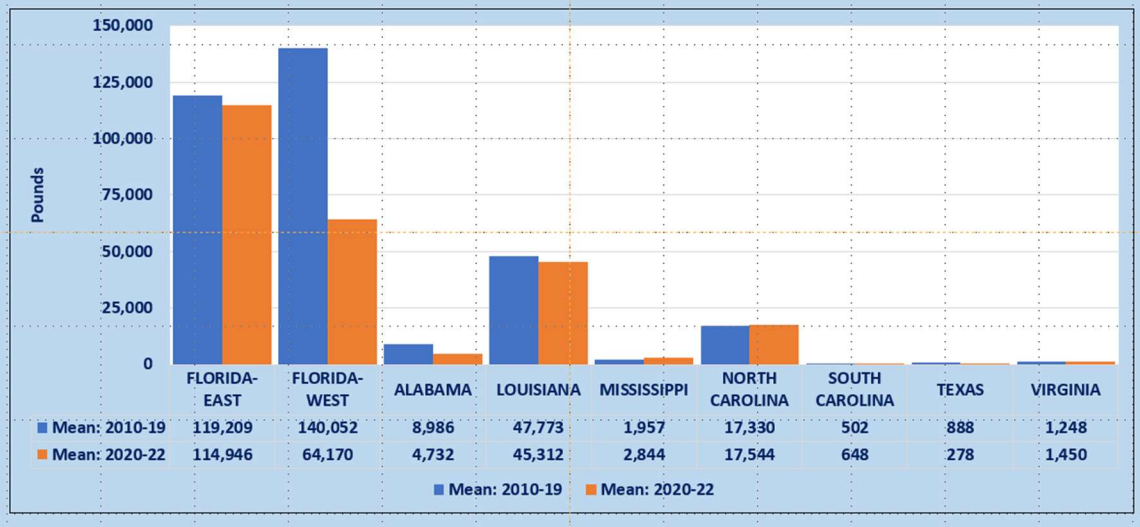
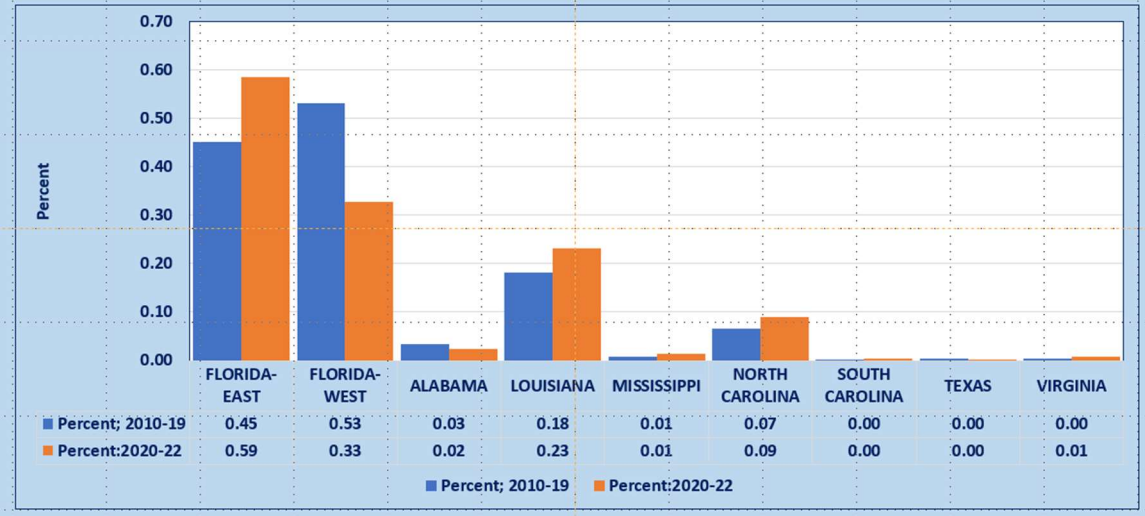


Fig. 5. U.S. commercial Florida Pompano landings by state and percent

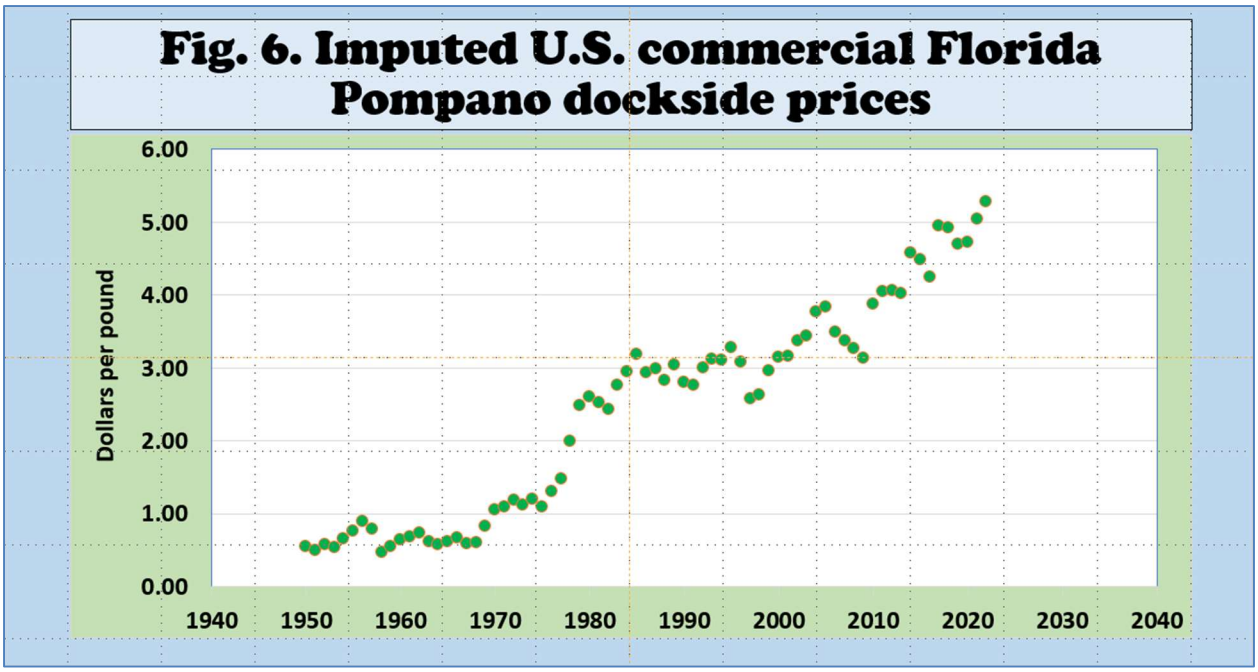


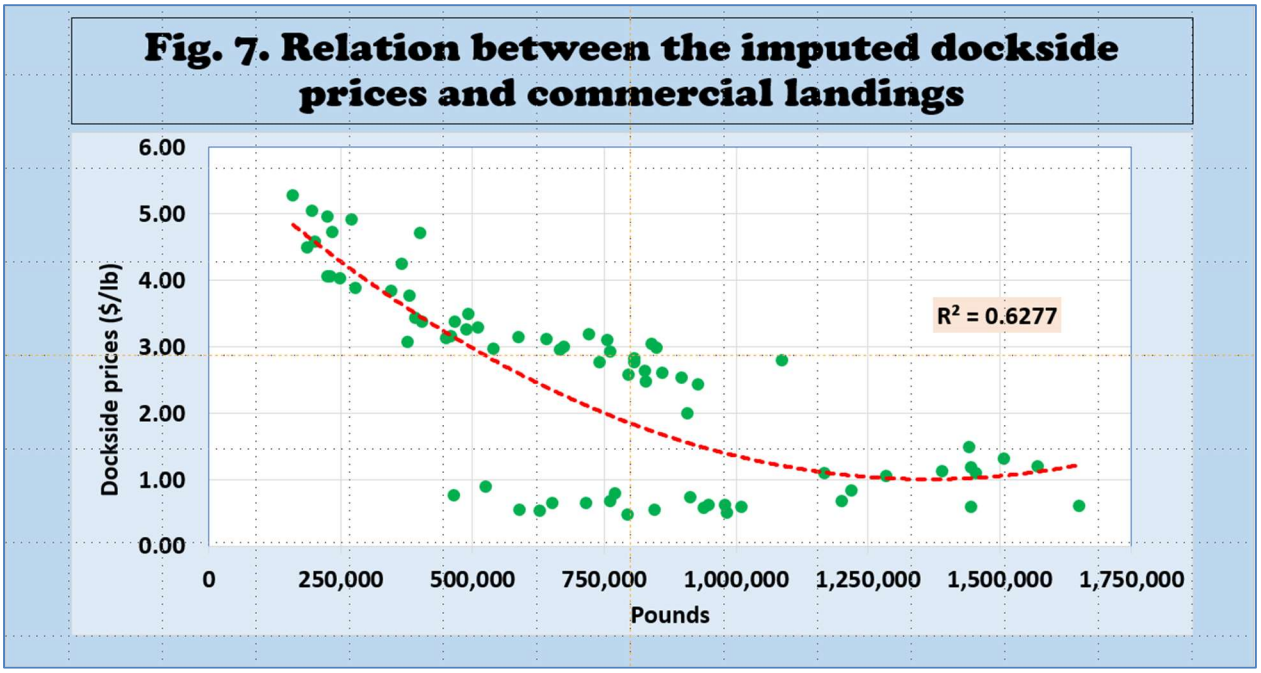
U.S. GULF OF MEXICO REGION COMMERCIAL FLORIDA POMPANO LANDINGS

- As Fig. 4 and 5 show, Florida's West Coast produced over 140,000 lb/yr from 2010 to 2019. Its share of total U.S. landings fell from 53% in 2010-19 2010 to 33% in 2020-22.
- Louisiana landed over 47,000 lb/yr from 2010-2019. Its share of total U.S. landings rose from 18% in 2010-19 to 23% in 2020-22.

IMPUTED U.S. COMMERCIAL FLORIDA POMPANO DOCKSIDE PRICES

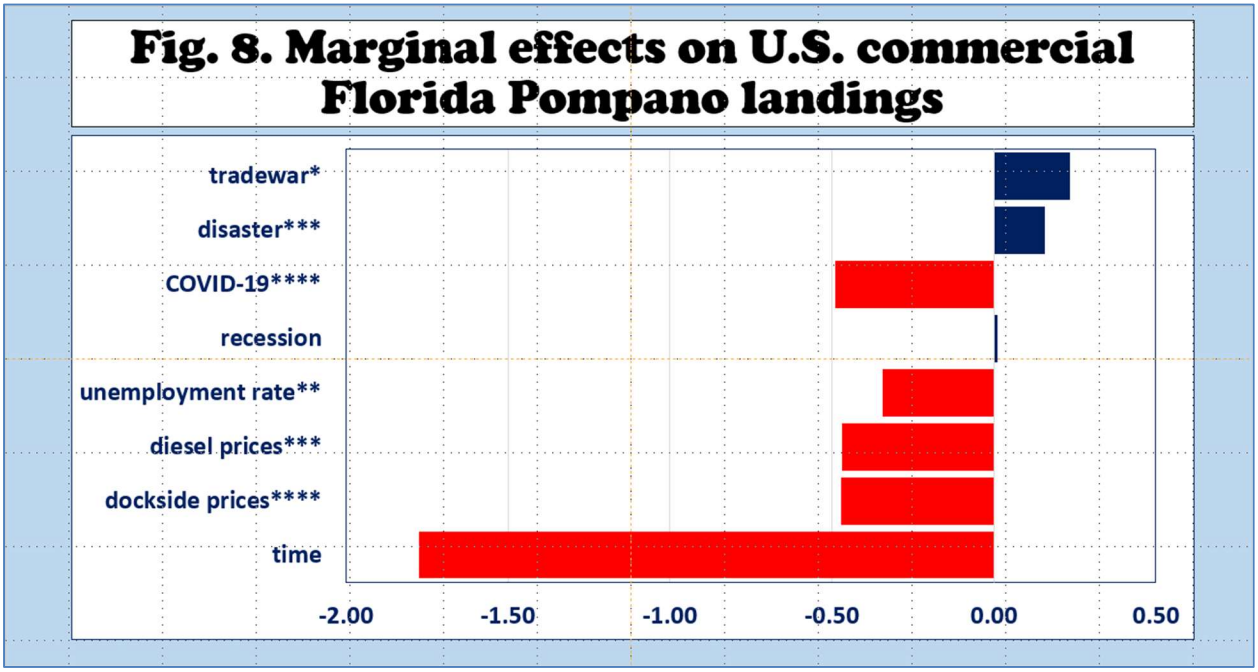
- The imputed dockside prices in the U.S. are shown in Fig. 6.
- U.S. dockside prices continued to rise and peaked in 2022 at $5.27 per pound.





IMPUTED U.S. COMMERCIAL FLORIDA POMPANO DOCKSIDE PRICES AND COMMERCIAL LANDINGS

- An inverse relationship (R=0.67) between the imputed dockside prices and commercial landings in the U.S. is shown in Fig. 7.
- A flatter relationship (R=0.21) is observable between the deflated U.S. dockside prices and commercial landings.

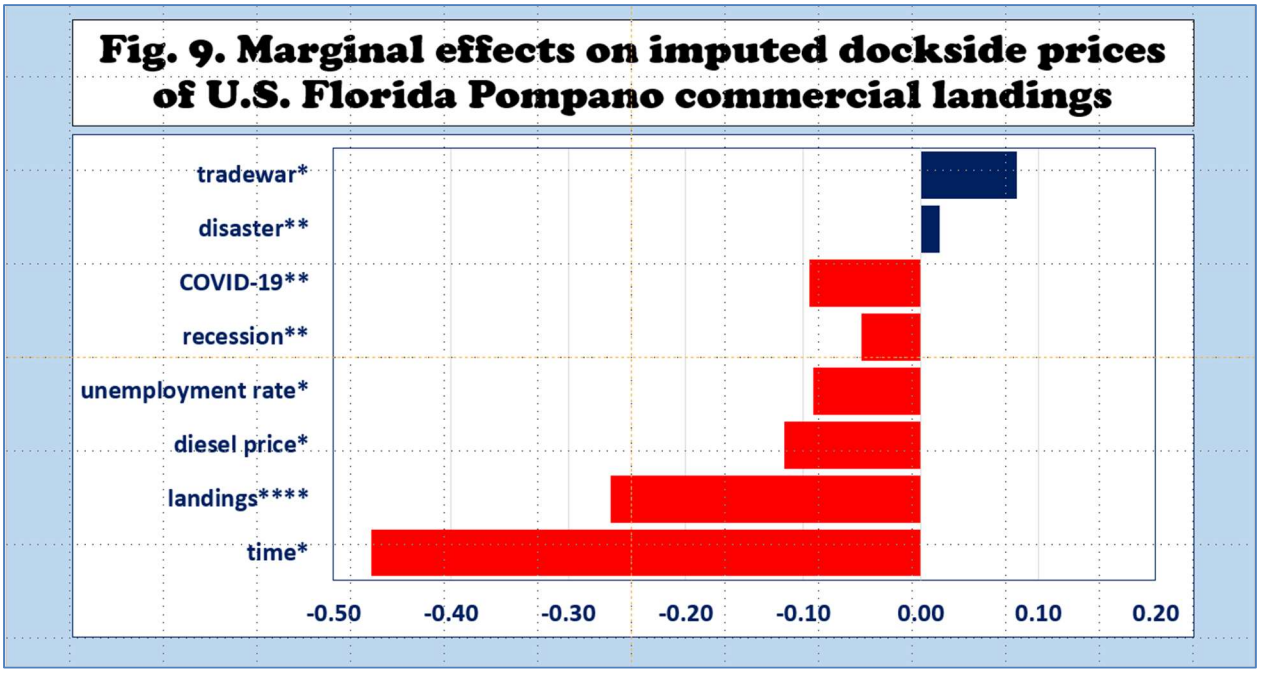


MARGINAL EFFECTS ON U.S. FLORIDA POMPANO COMMERCIAL LANDINGS

- Fig. 8 summarizes the double-log regression results, with the natural logarithm of U.S. commercial Florida Pompano landings as the dependent variable.
- The addition of diesel prices reduced the number of observations to 28 covering the years from 1995 to 2022.
- The estimated equation explained 91% of the variations in commercial landings.
- Seven variables significantly influenced commercial landings.
- U.S. commercial landings significantly fell yearly over time.
- Dockside prices significantly declined when U.S. commercial landings increased.
- U.S. commercial landings significantly decreased when diesel prices rose, higher unemployment, and the COVID-19 period.
- It seemed that significant increases in U.S. commercial landings were observed during disasters and trade wars.

MARGINAL EFFECTS ON IMPUTED DOCKSIDE PRICES OF U.S. FLORIDA POMPANO COMMERCIAL LANDINGS

- The double-log regression results with the natural logarithm of the real imputed dockside prices of U.S. commercial Florida Pompano landings as the dependent variable are summarized in Fig. 9.
- The addition of diesel prices reduced the number of observations to 28 covering the years from 1995 to 2022.
- The estimated equation explained 75% of the variations in commercial landings.
- Seven variables significantly influenced dockside prices.
- The imputed real dockside prices of U.S. commercial Florida Pompano landings significantly fell yearly.
- The imputed real dockside prices of U.S. commercial Florida Pompano landings significantly fell at higher commercial landings.
- The imputed real dockside prices of U.S. commercial Florida Pompano landings significantly declined during recessions and COVID-19, at higher diesel prices and unemployment.



- Dockside prices significantly rose during disasters and trade wars.

SUMMARY, LIMITATIONS, AND IMPLICATIONS

- Since 2010, the total number of U.S. Florida Pompano landings has averaged more than 2.7 million pounds annually, with recreational landings contributing 90%.
- The major commercial-producing states of Florida Pompano are Florida East Coast, Florida West Coast, North Carolina, and Louisiana.
- During the past two decades, the U.S. Florida Pompano commercial landings averaged almost 250,000 pounds per year, valued at $1.1 million.
- U.S. commercial landings significantly fell over time.
- Dockside prices significantly declined when U.S. commercial landings increased.
- U.S. commercial landings significantly decreased when diesel prices rose, there was higher unemployment, and the COVID-19 period.
- The imputed real dockside prices of U.S. commercial Florida Pompano landings significantly fell at higher commercial landings.
- The imputed real dockside prices of U.S. commercial Florida Pompano landings significantly declined during recessions and COVID-19, at higher diesel prices and unemployment.
- Dockside prices significantly rose during disasters and trade wars.