

The Economics of Herd Expansion

**2015 UF Beef Cattle Short Course
Gainesville, FL, May 13-15, 2015**

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Finally.....

**We are getting paid
for what we do!**

The Economics of Herd Expansion

- **Historical Expansion Period**
- **US Long-Term Price Projections**
- **Florida 10-Year Price Projections**
- **Florida 10-Year Revenue Projections**
- **Florida 10-Year Cost Projections**
- **Florida 10-Year Profit Projections**

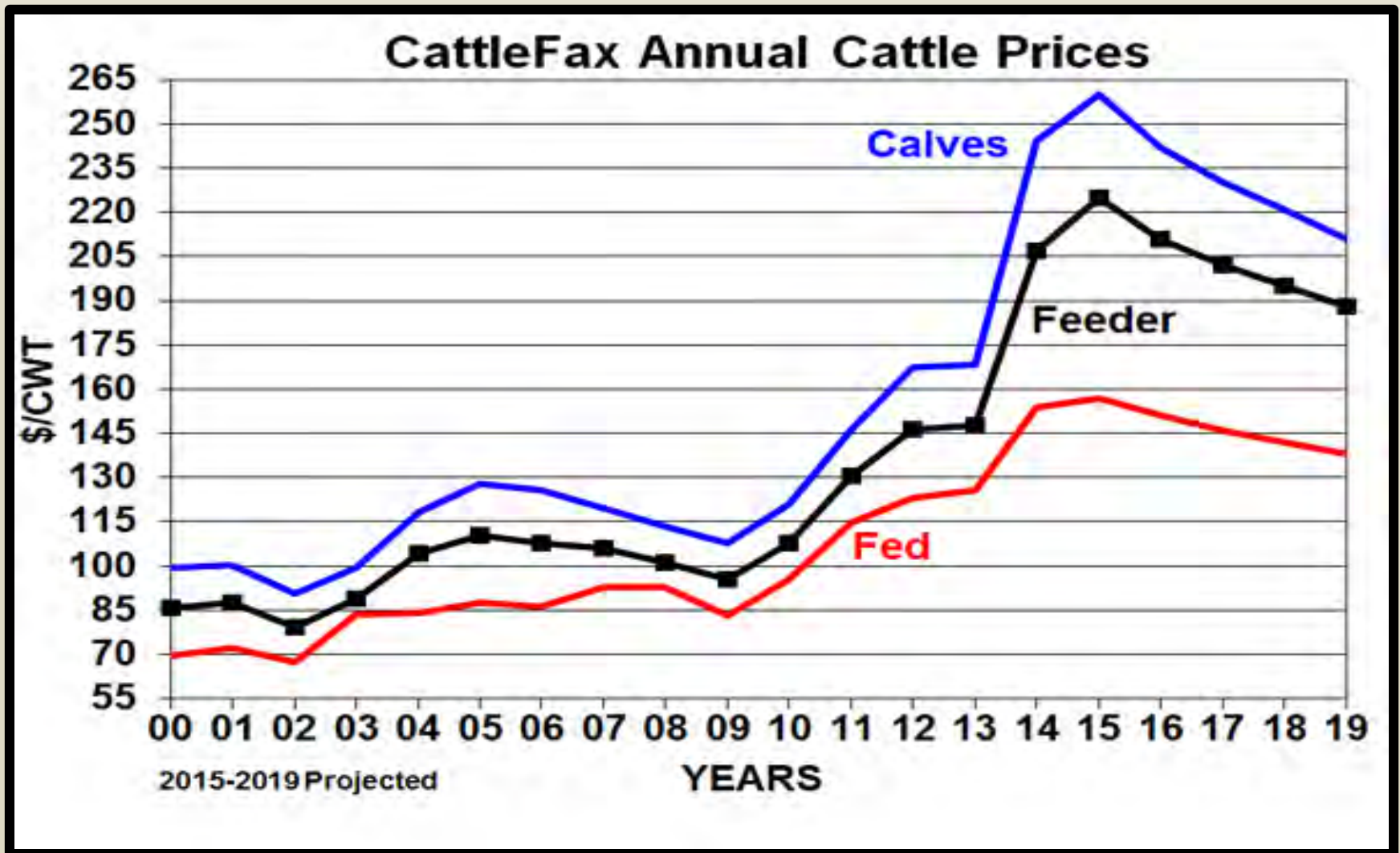
These are the basic projections that we are using in this analysis. If they are different than yours, you simply need to modify the information for your operation.

The Economics of Herd Expansion

Current Situation:

- **On average 2015 annual feeder calf prices are expected to set a new record.**
- **2015 beef production costs have stabilized and in some cases moved lower (such as lower feed, fuel, and fertilizer prices).**
- **The majority of cow-calf producers are profitable in 2015. (Finally we are getting paid for what we do!)**
- **Beef herd expansion is underway as of 1/1/2015.**

What should we expect when we expand U.S. beef production?

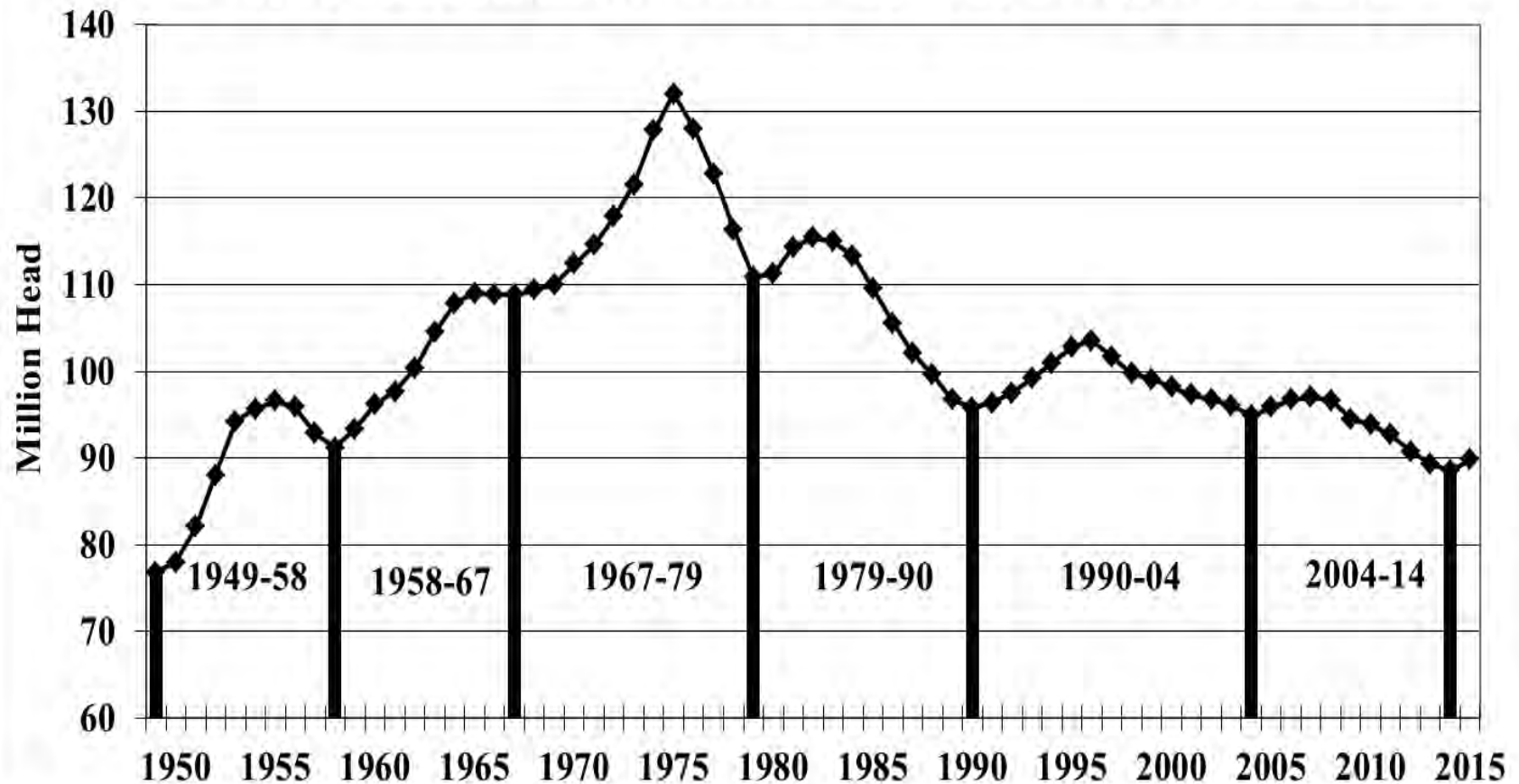


Will it be smooth sailing or rough waters?



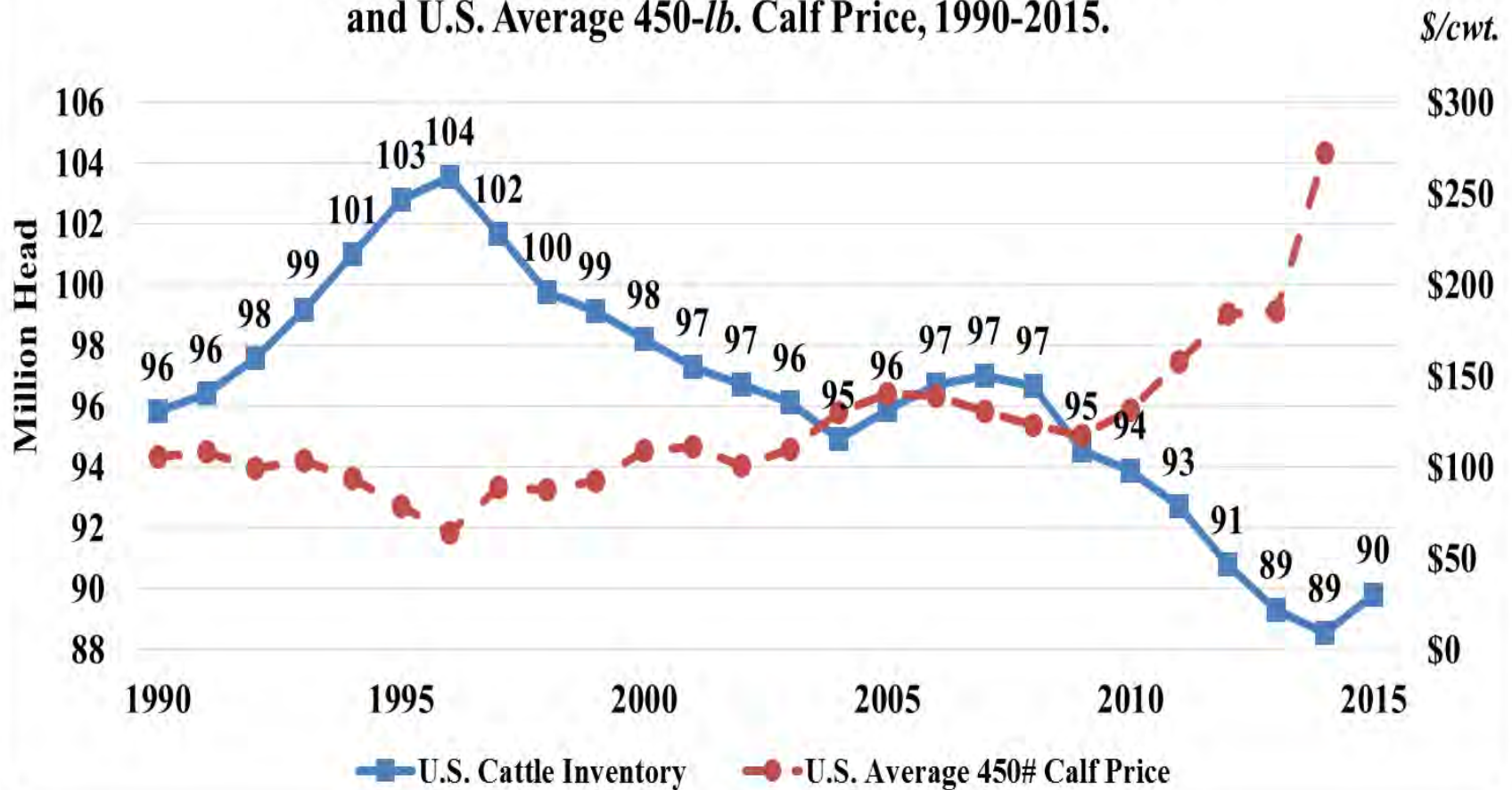
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Figure 1. U.S. Cattle and Calves Inventory, 1949-2015



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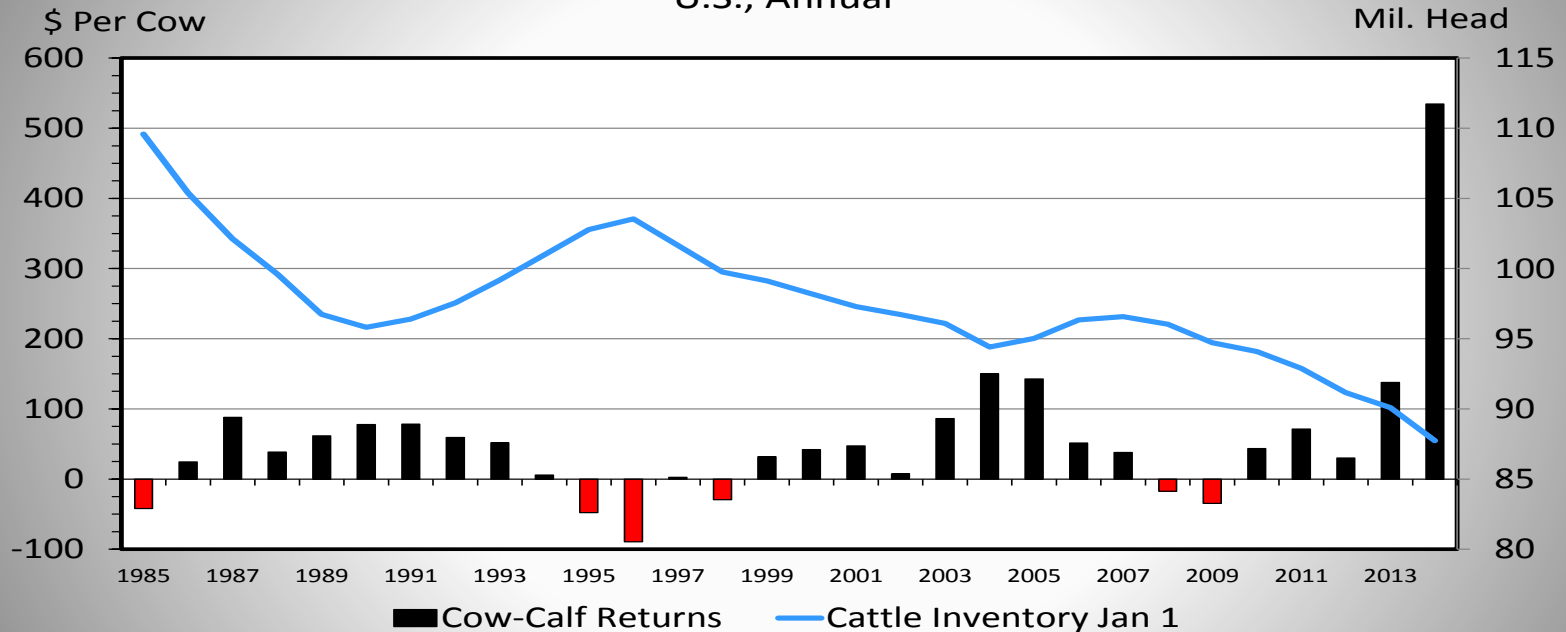
Figure 2. Inverse Relationship of U.S. Cattle Inventory and U.S. Average 450-lb. Calf Price, 1990-2015.



What Goes Up, Eventually Comes Down

Current Situation

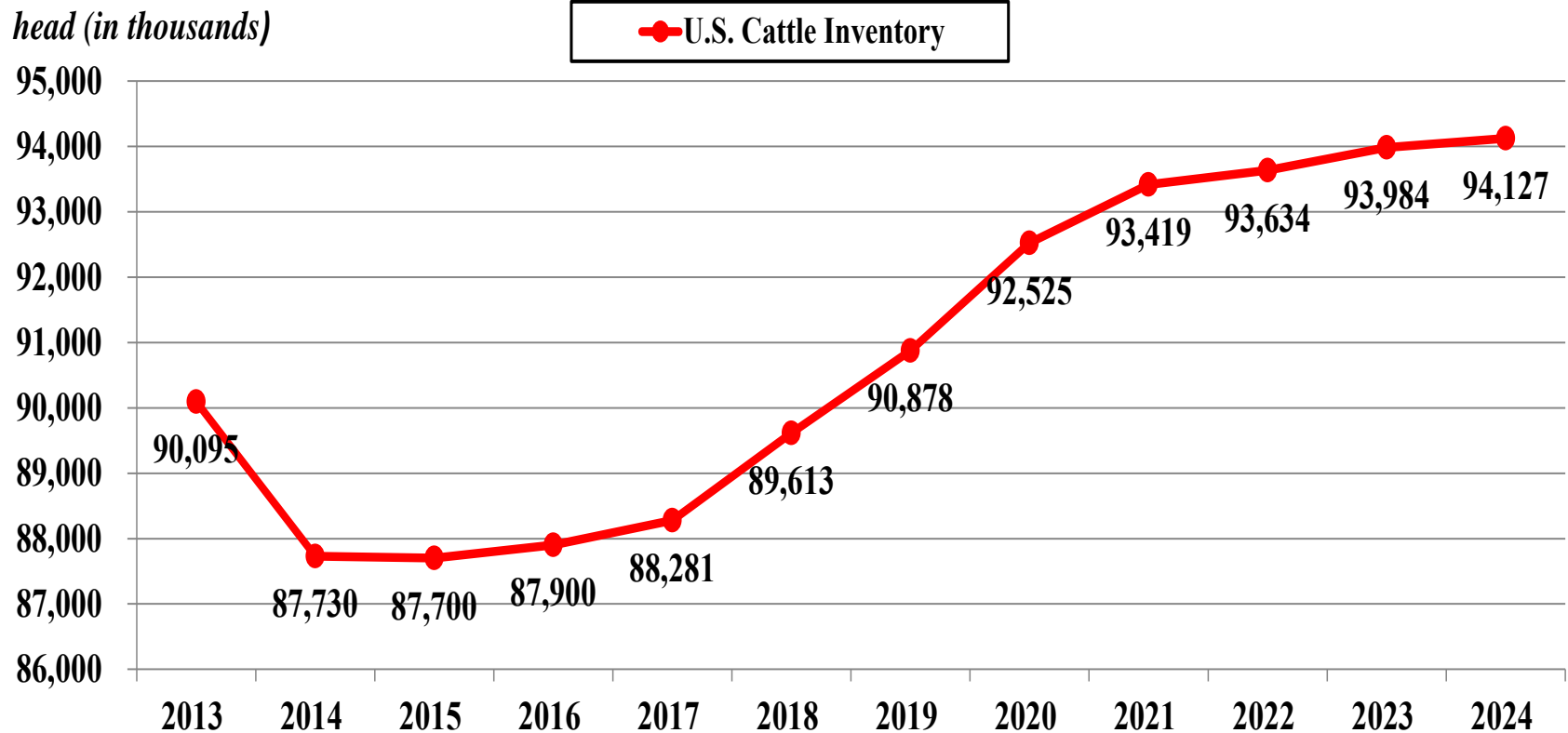
COW-CALF RETURNS AND CATTLE INVENTORY
U.S., Annual



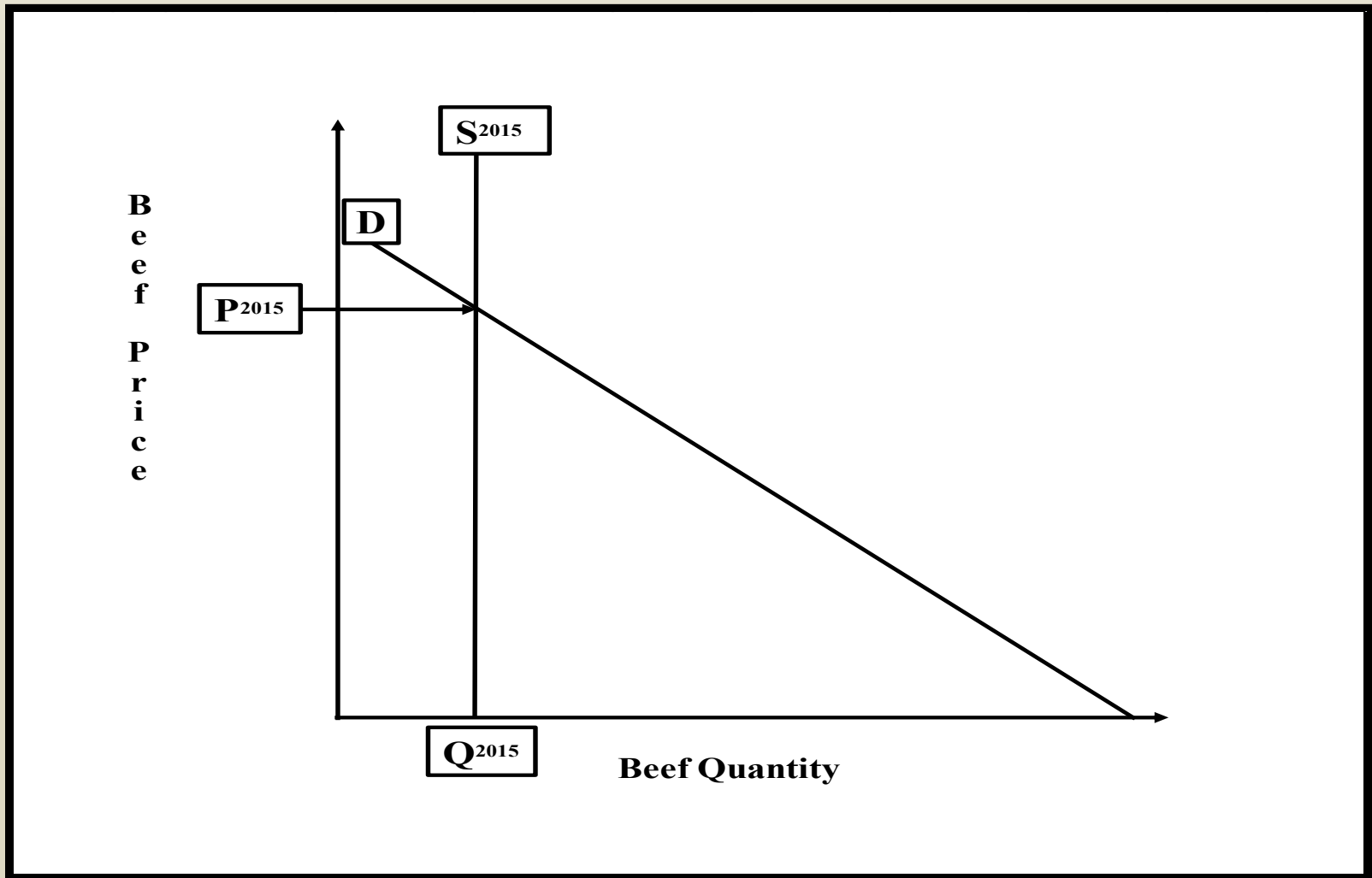
- Historically High Margins (2012, 2013, 2014)
- Positive Profits are expected for the next several years...

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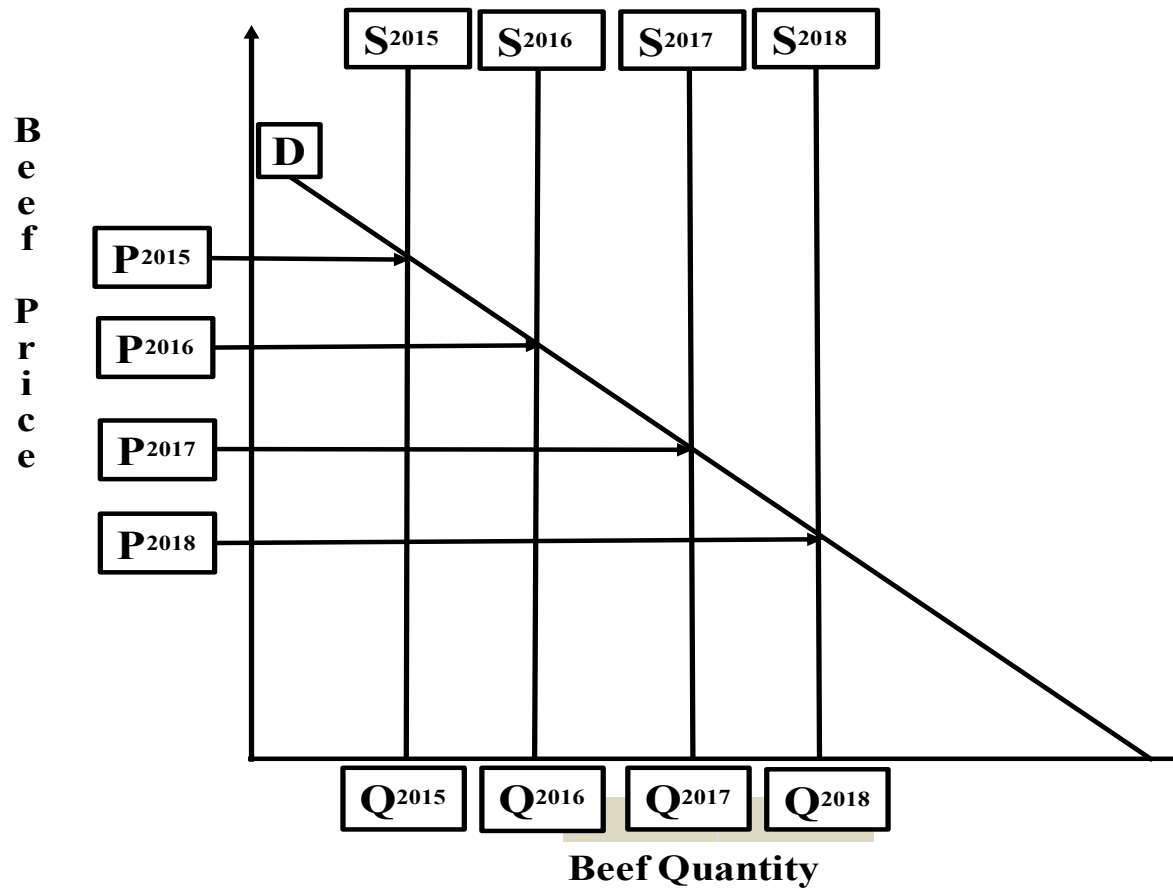
Figure 3. U.S. Cattle Inventory,
USDA Long-Term Projections 2013-2024



What should we expect when we expand U.S. beef production?



What should we expect when we expand U.S. beef production?



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Future Situation:

******Record high feeder calf prices will not likely continue.**

- **Beef herd expansion will likely continue but is expected to be limited due to:**
 - a) fewer pasture acres
 - b) average age of cattle producers and their perceptions of risk
 - c) high capital requirements for expansion
 - d) uncertain domestic and foreign economies
 - e) other factors.

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Future Situation:

- **Average annual feeder calf prices are expected to move lower as herd expansion and beef tonnage increases.**
- **Outliers such as adverse weather, terrorist events, weaknesses in domestic and foreign economies, wars, etc. will alter future production and market price levels.**
- **Future beef production costs are likely to increase over time.**
- **The majority of cow-calf producers should be profitable for the next three or four more years and then incur losses until cattle producers reduce inventory and beef tonnage levels.**

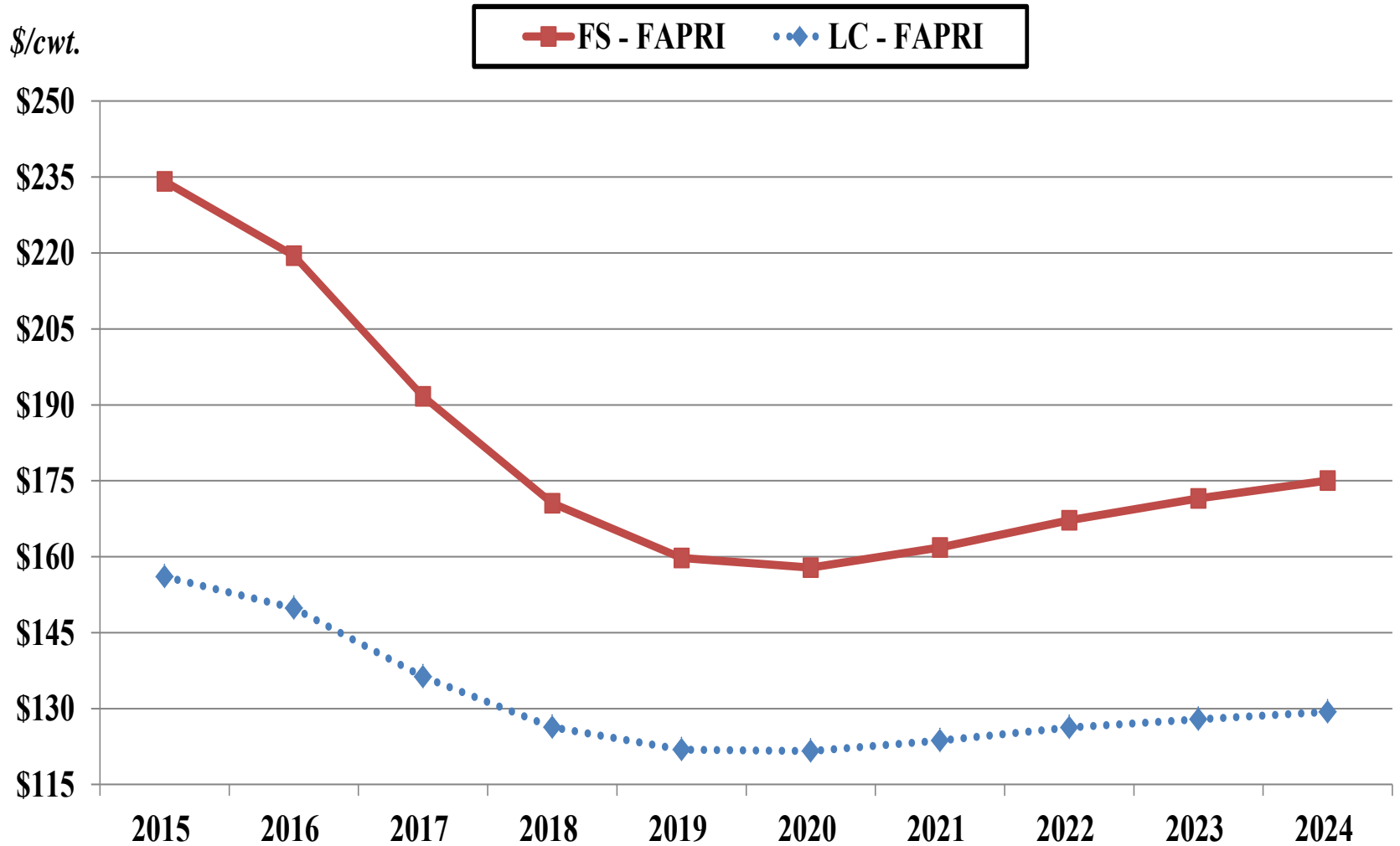
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Future Situation:

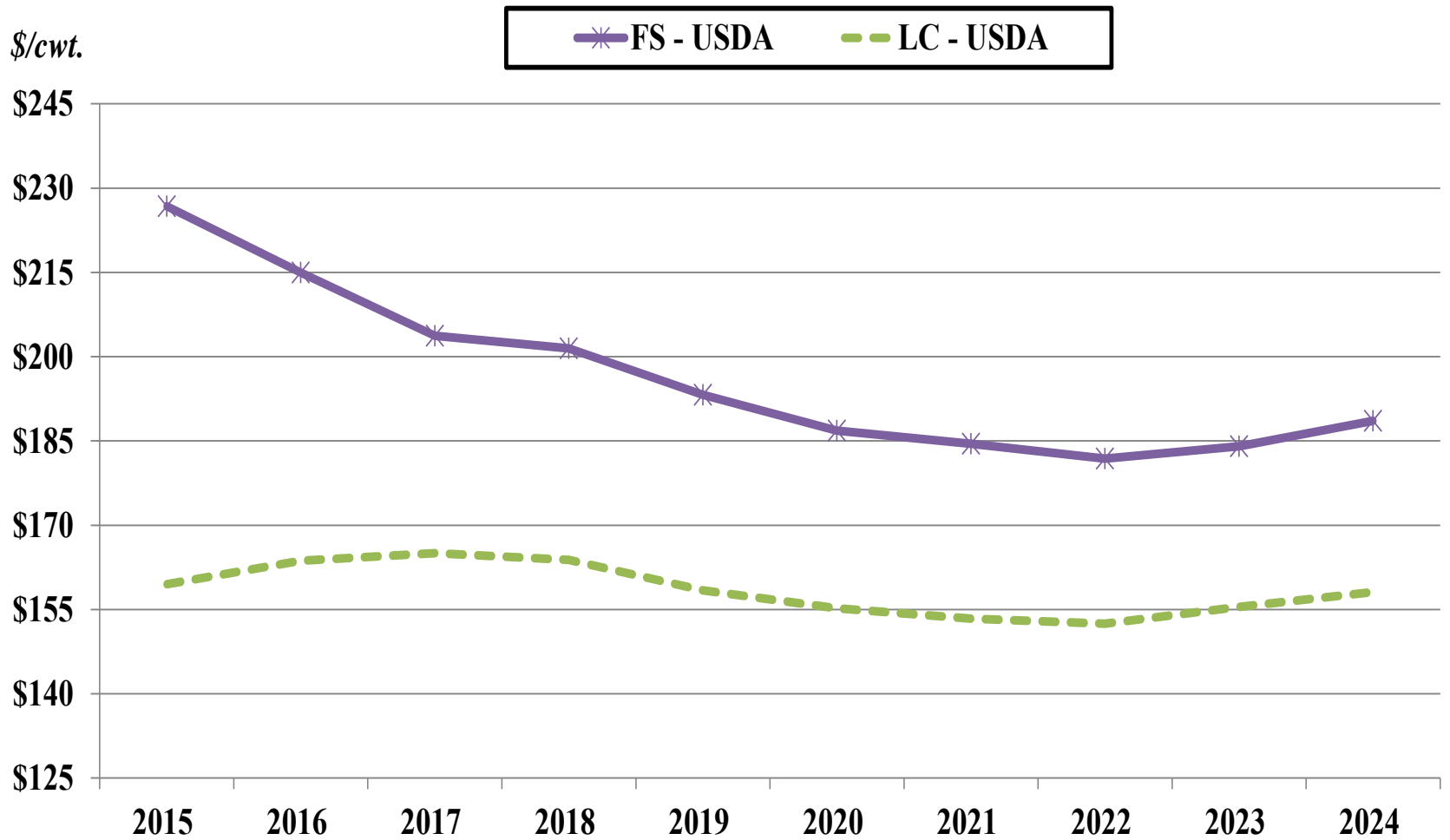
Let's look at long-term beef price projections made by:

- **The Food and Policy Research Institute (FAPRI)**
- **United States Department of Agriculture (USDA)**

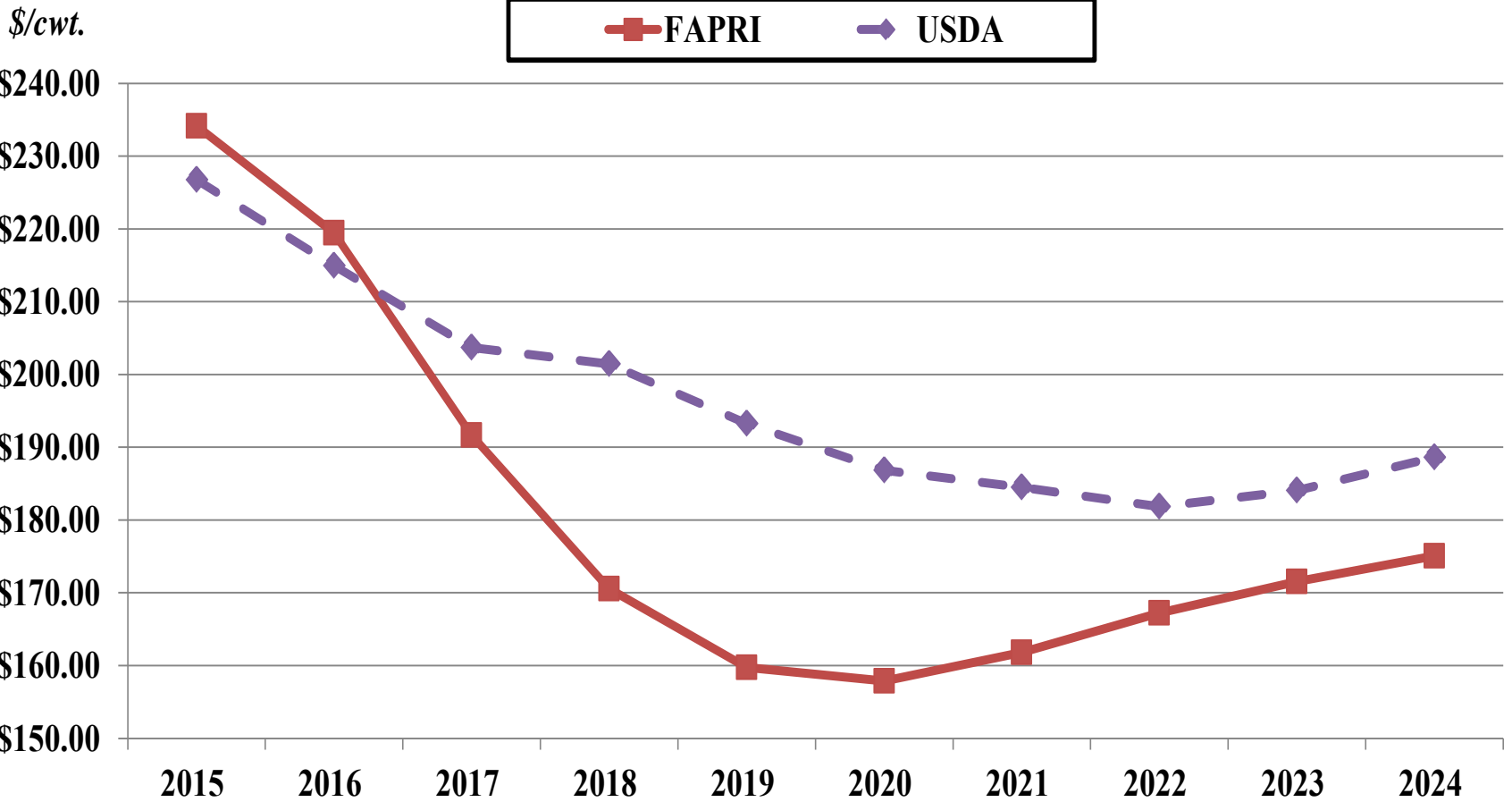
FAPRI Long-Term Beef Price Projections, 2015-2024



USDA Long-Term Beef Price Projections, 2015-2024



Oklahoma City Feeder Steers, 650 lbs. Long-Term Beef Price Projections, 2015-2024



After modifying the average Oklahoma City Feeder Steer Calf Prices for weight, sex, and handling and transportation costs, the following annual average feeder calf prices were projected for Florida over a 10-year period.

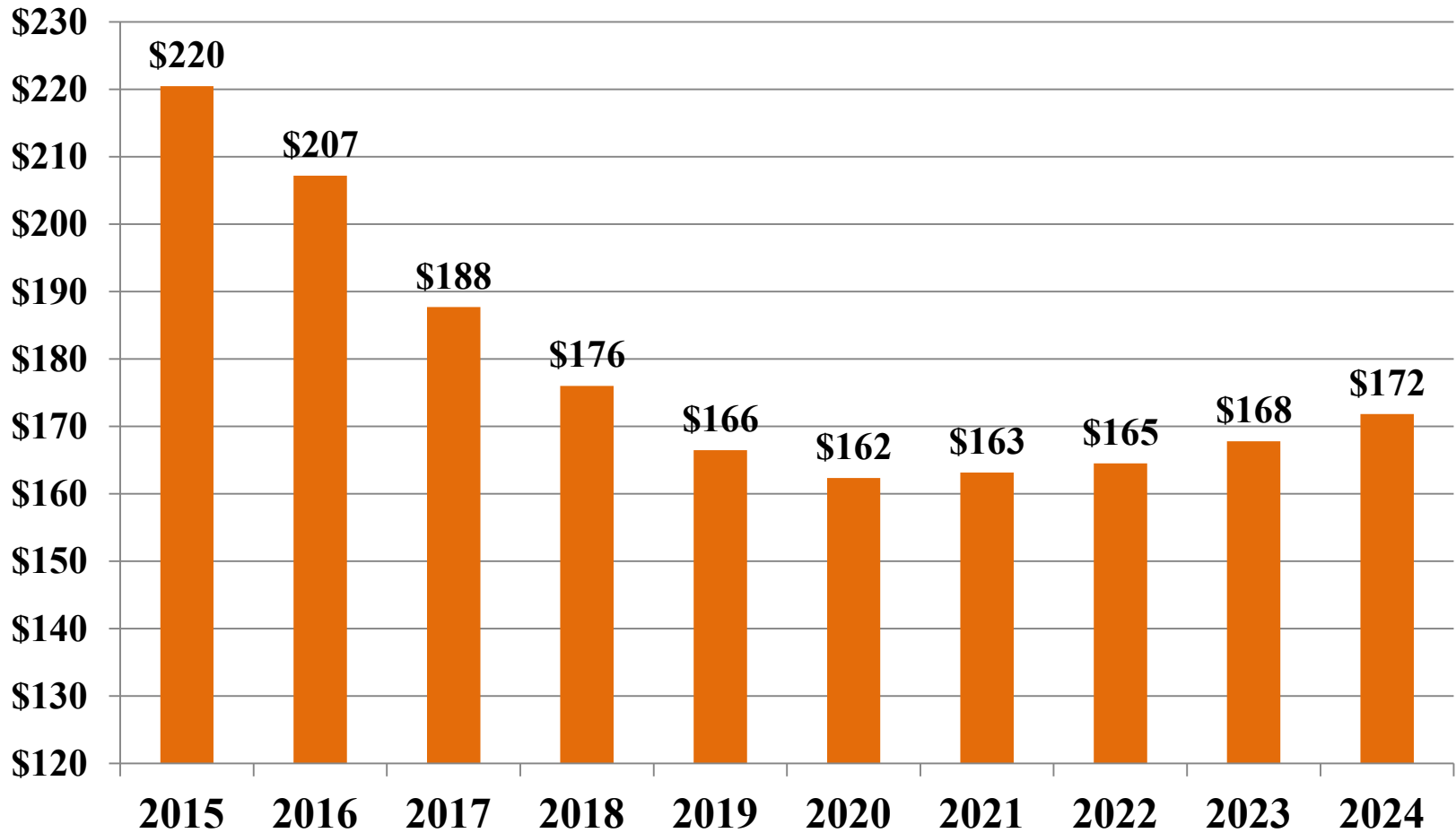
Table 2. Projected Florida Feeder Calf Prices, Med. & Lg., #1-#2, 525 lbs.

Units	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
<i>\$/cwt.</i>	\$220	\$207	\$188	\$176	\$166	\$162	\$163	\$165	\$168	\$172
<i>\$/hd.</i>	\$1,157	\$1,088	\$985	\$924	\$874	\$852	\$857	\$864	\$881	\$902
<i>\$/truckload</i>	\$110,228	\$103,603	\$93,846	\$88,002	\$83,243	\$81,176	\$81,576	\$82,271	\$83,896	\$85,911

Florida Feeder Calf Prices

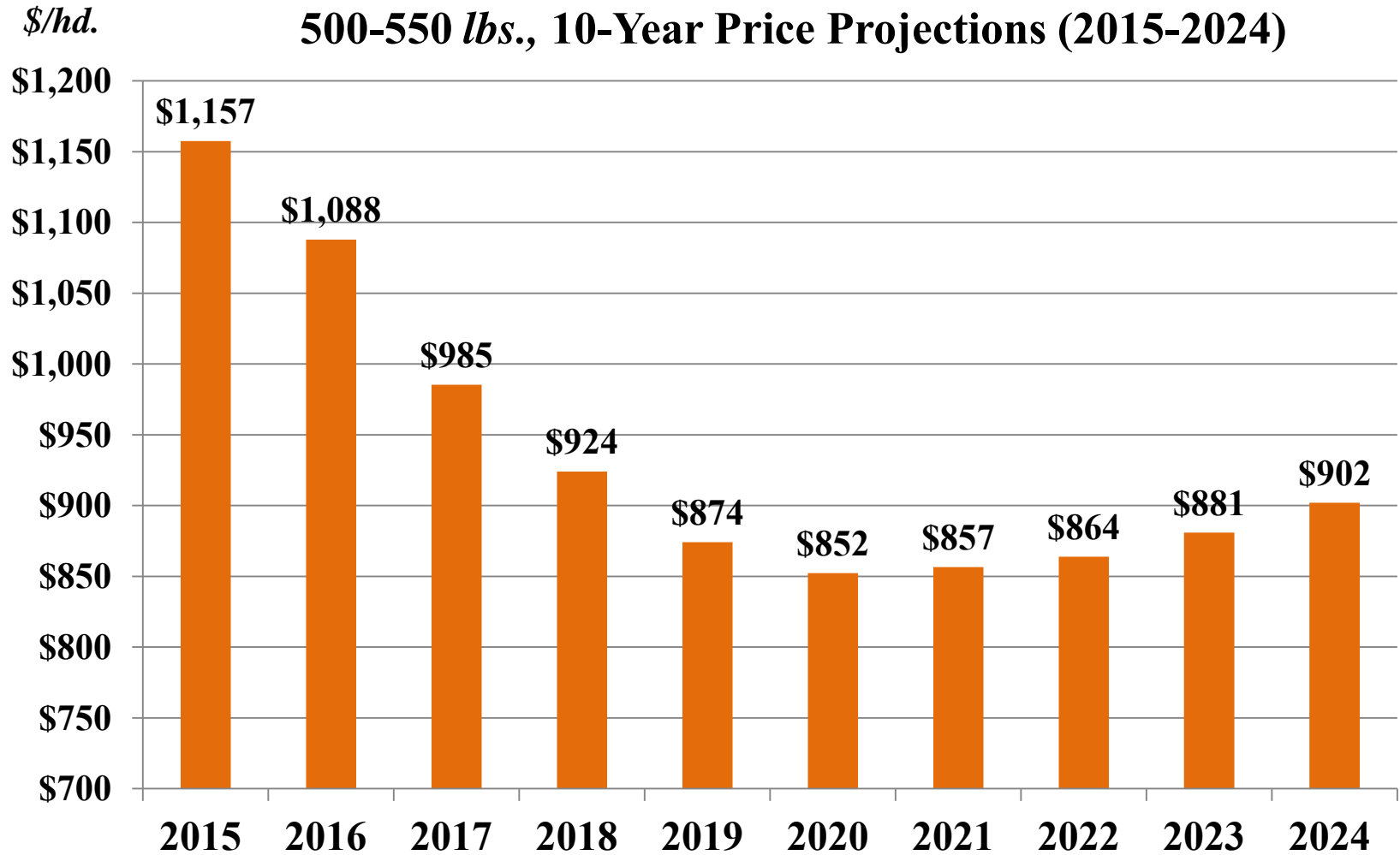
500-550 lbs., 10-Year Price Projections (2015-2024)

\$/cwt.



Florida Feeder Calf Prices

500-550 lbs., 10-Year Price Projections (2015-2024)



Projected Florida Feeder Calf Revenue Per Brood Cow

500-550 lbs., 10-Year Revenue Projections (2015-2024)

\$/cow

\$1,020

\$970

\$920

\$870

\$820

\$770

\$720

\$670

2015

2016

2017

2018

2019

2020

2021

2022

2023

2024

\$984

\$925

\$838

\$785

\$743

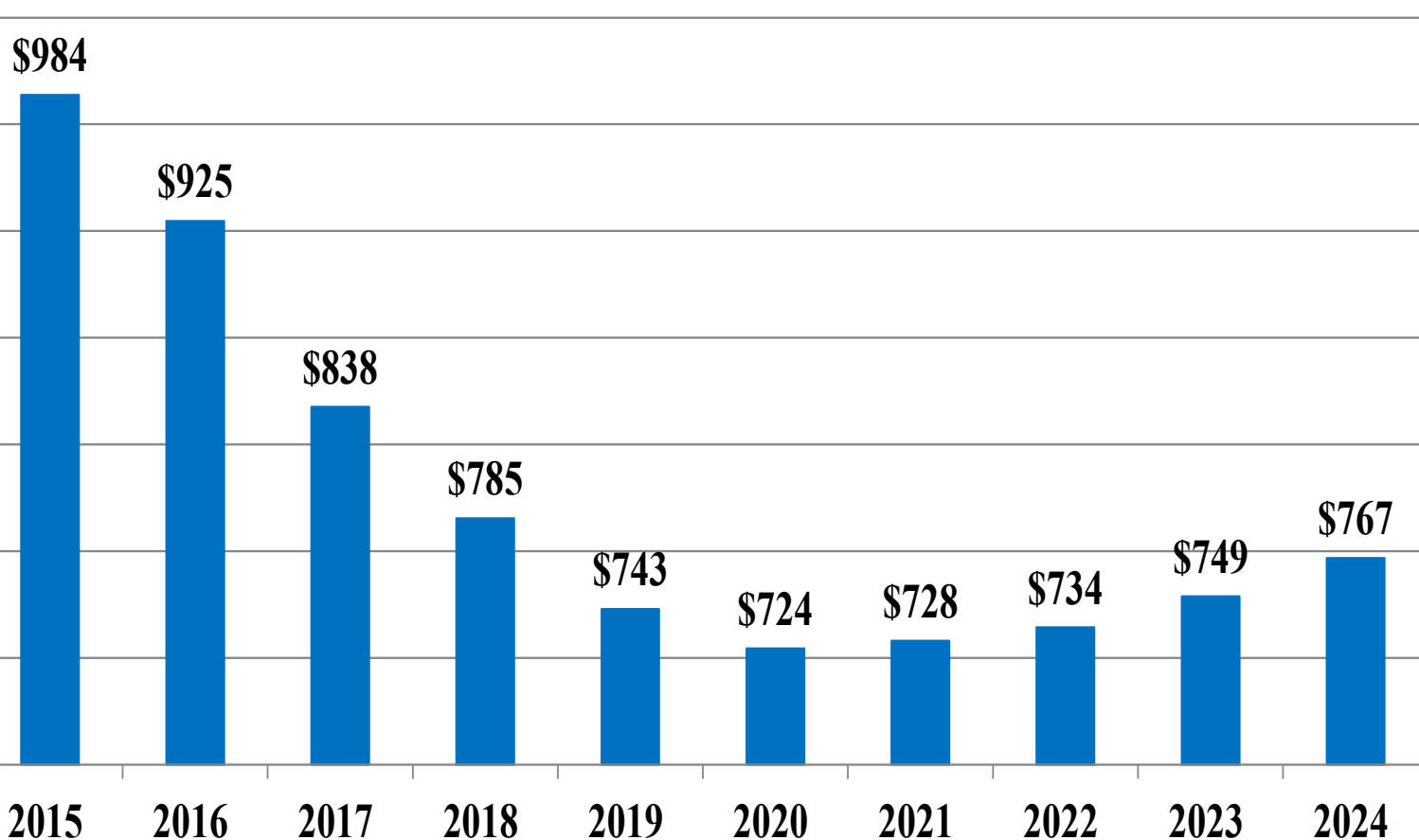
\$724

\$728

\$734

\$749

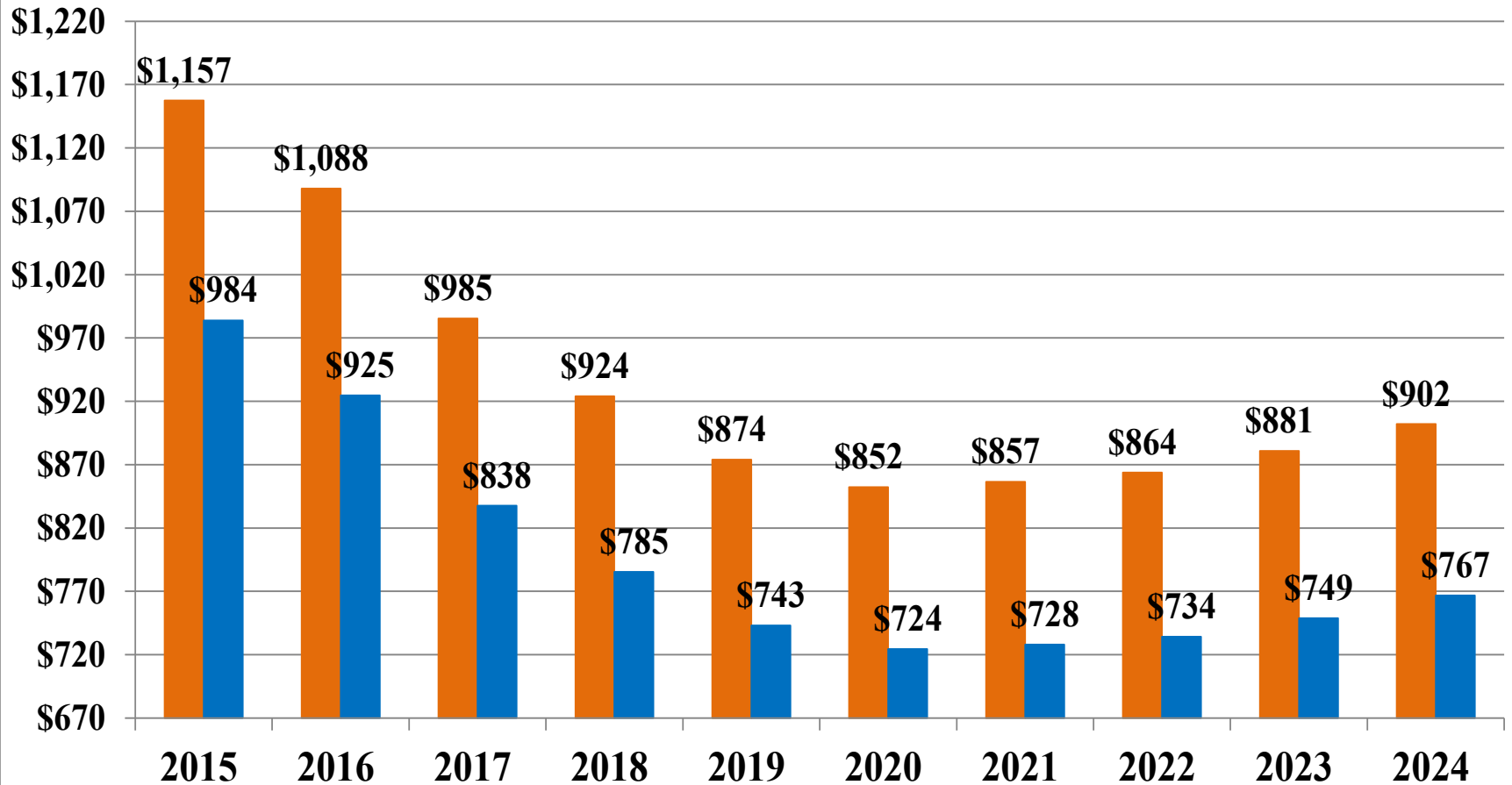
\$767



Projected Florida Feeder Calf Revenue

500-550 lbs., 10-Year Projections (2015-2024)

■ *\$/calf* ■ *\$/brood cow*



**Projected Revenue Differences
between *\$/Feeder Calf* and *\$/Brood Cow*
500-550 lbs., 10-Year Projections (2015-2024)**

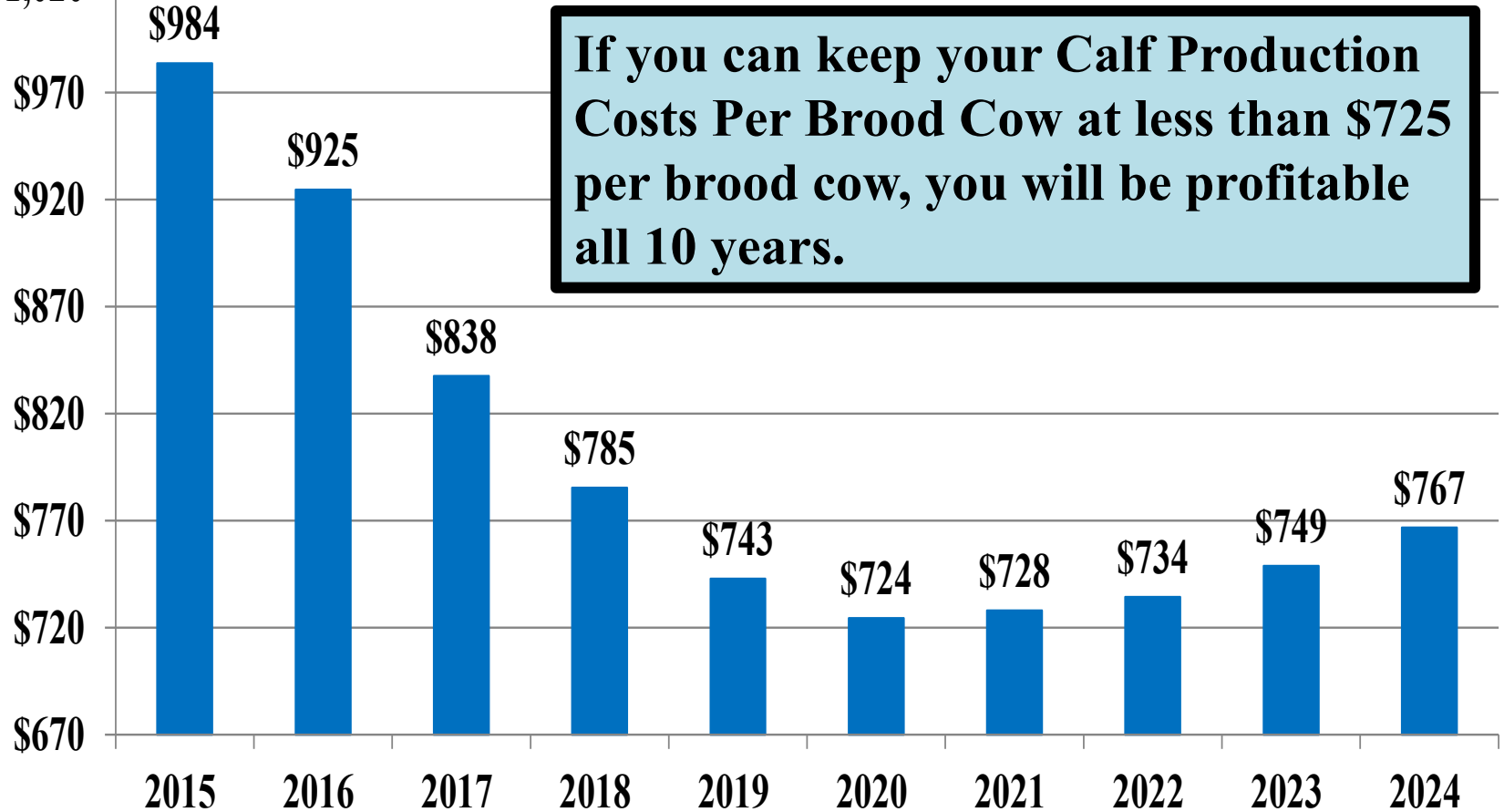


Projected Florida Feeder Calf Revenue Per Brood Cow

500-550 lbs., 10-Year Revenue Projections (2015-2024)

\$/cow

\$1,020



If you can keep your Calf Production Costs Per Brood Cow at less than \$725 per brood cow, you will be profitable all 10 years.

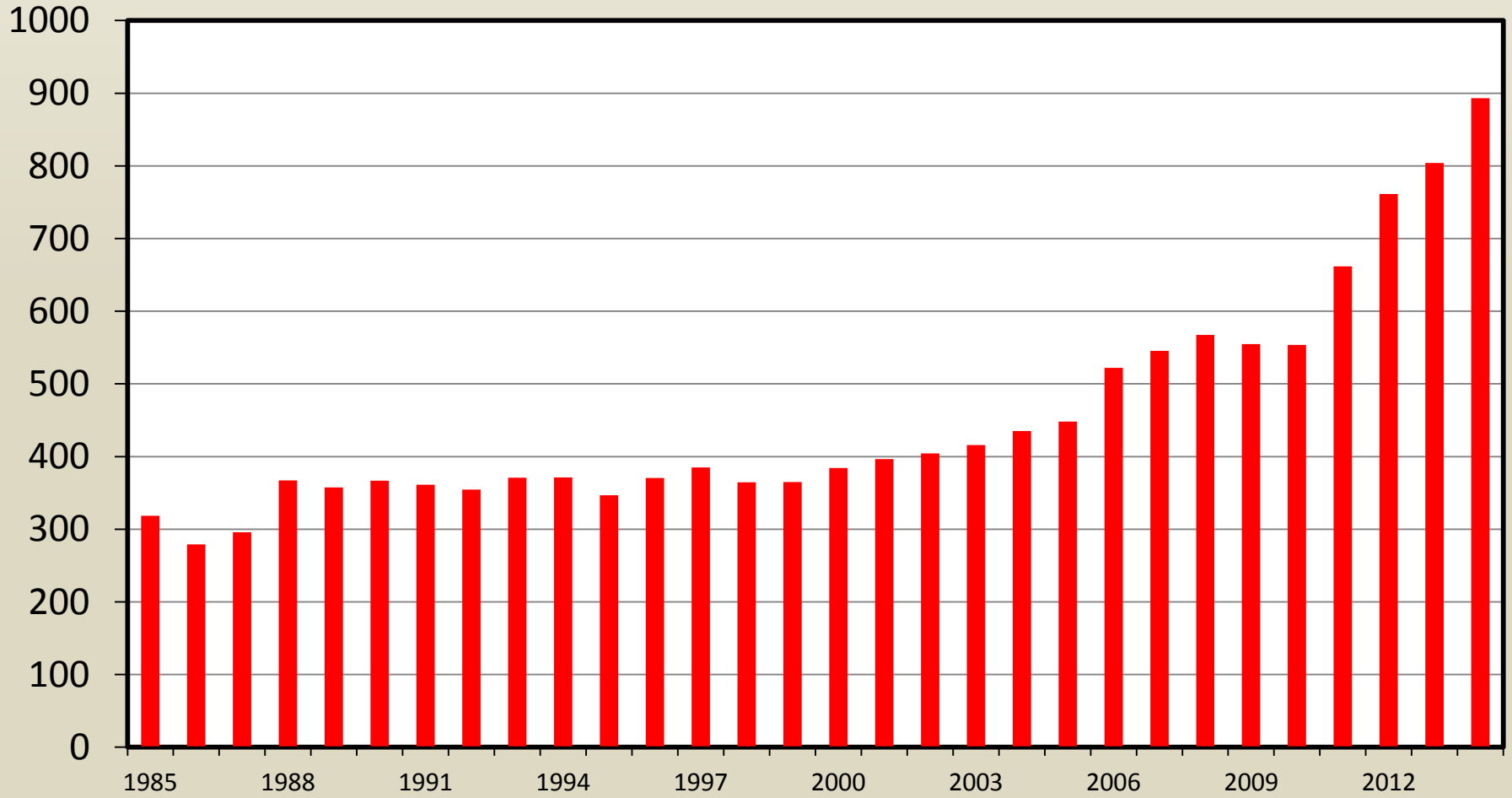
The Economics of Herd Expansion

**Next we need to
address cow-calf
production costs?**

ESTIMATED AVERAGE COW CALF COSTS

Includes Pasture Rent, Annual

\$ Per Cow

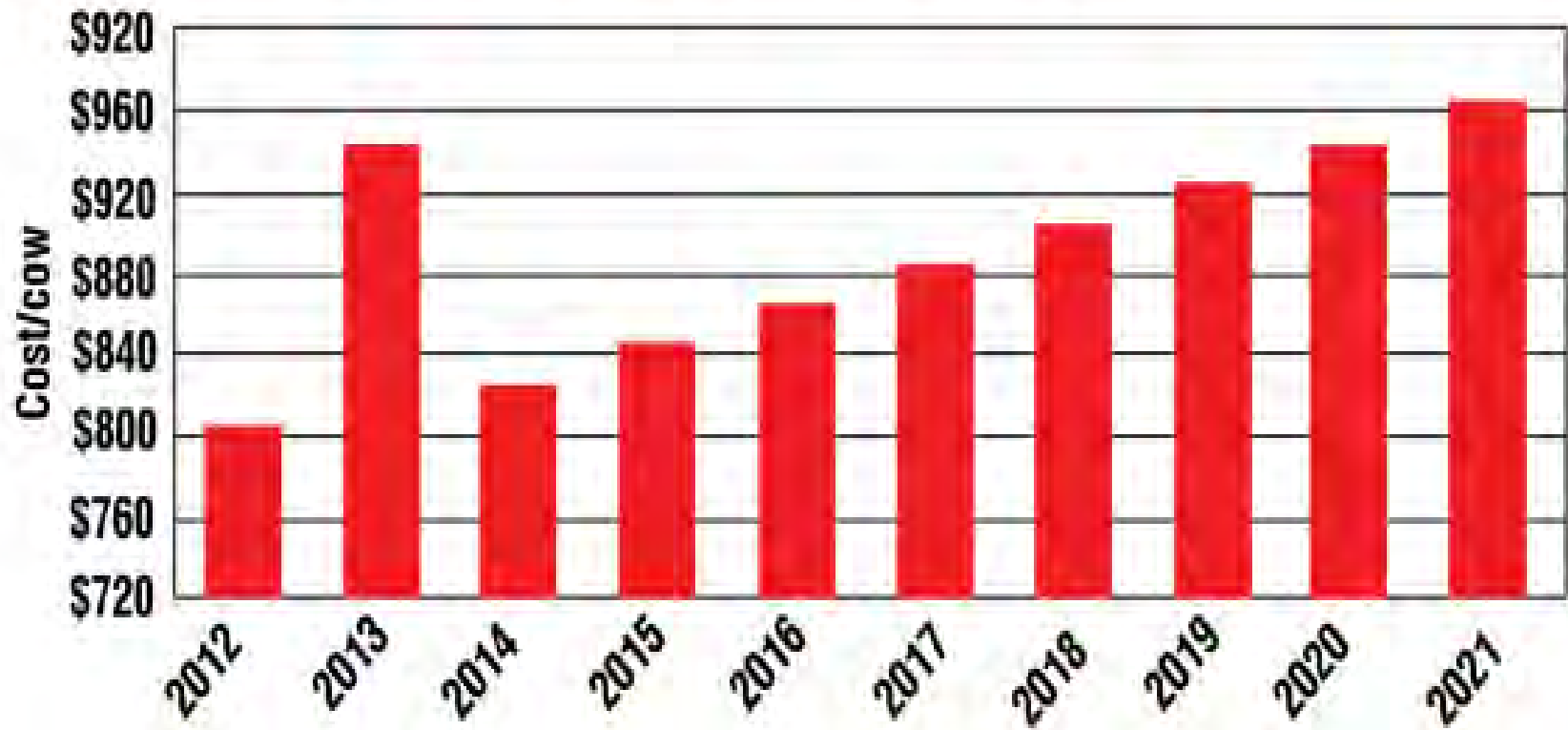


Data Source: USDA-AMS, NASS, Analysis by LMIC

Livestock Marketing Information Center

Dr. Harlan Hughes – Beef Magazine Projected Cost of Production

Figure 5. Harlan's projected long-run economic costs of production*



*Eastern Wyoming/western Nebraska cowherds

Projected Florida Financial Calf Production Costs Per Brood Cow 500-550 lbs., 10-Year Cost Projections (2015-2024)

\$/cow

\$910

\$880

\$850

\$820

\$790

\$760

\$730

\$700

\$670

2015

2016

2017

2018

2019

2020

2021

2022

2023

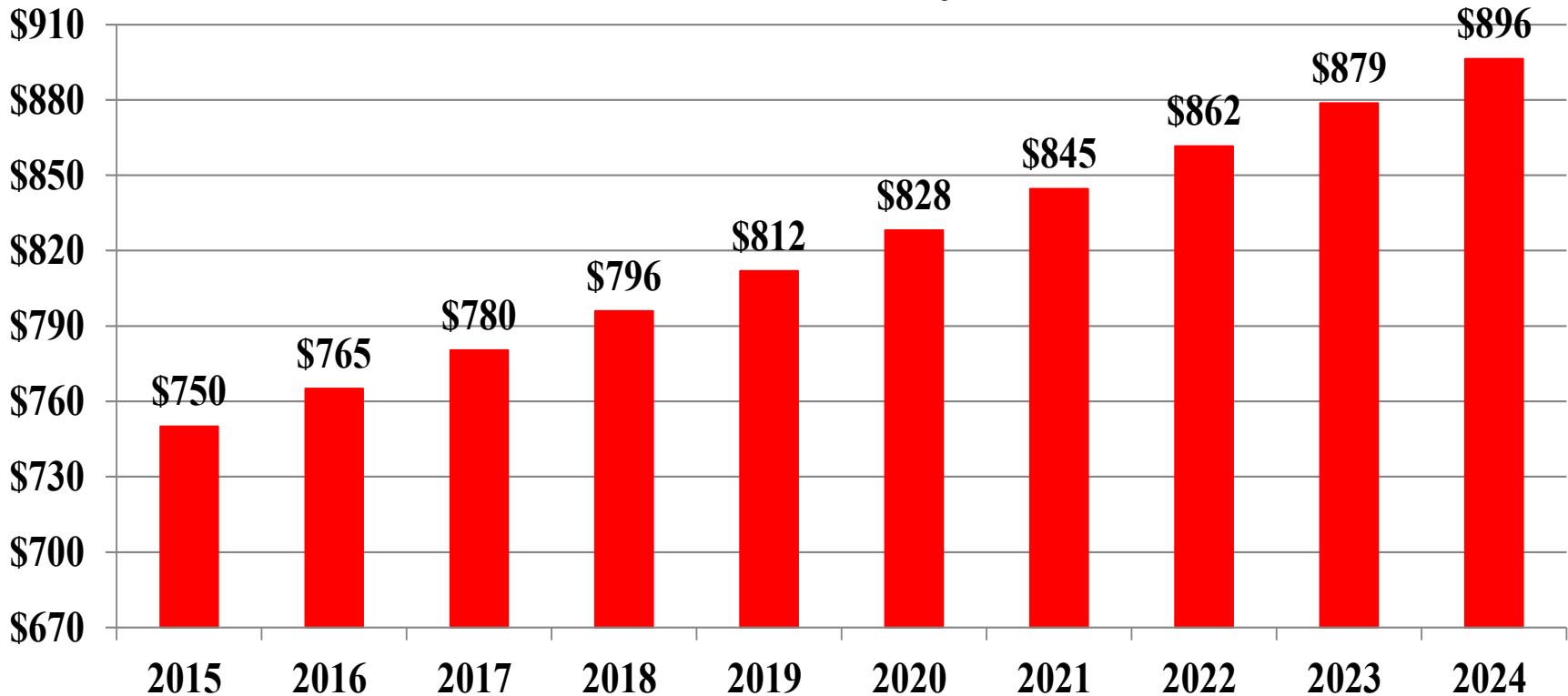
2024

\$750



Projected Florida Financial Calf Production Costs Per Brood Cow 500-550 lbs., 10-Year Cost Projections (2015-2024)

\$/cow

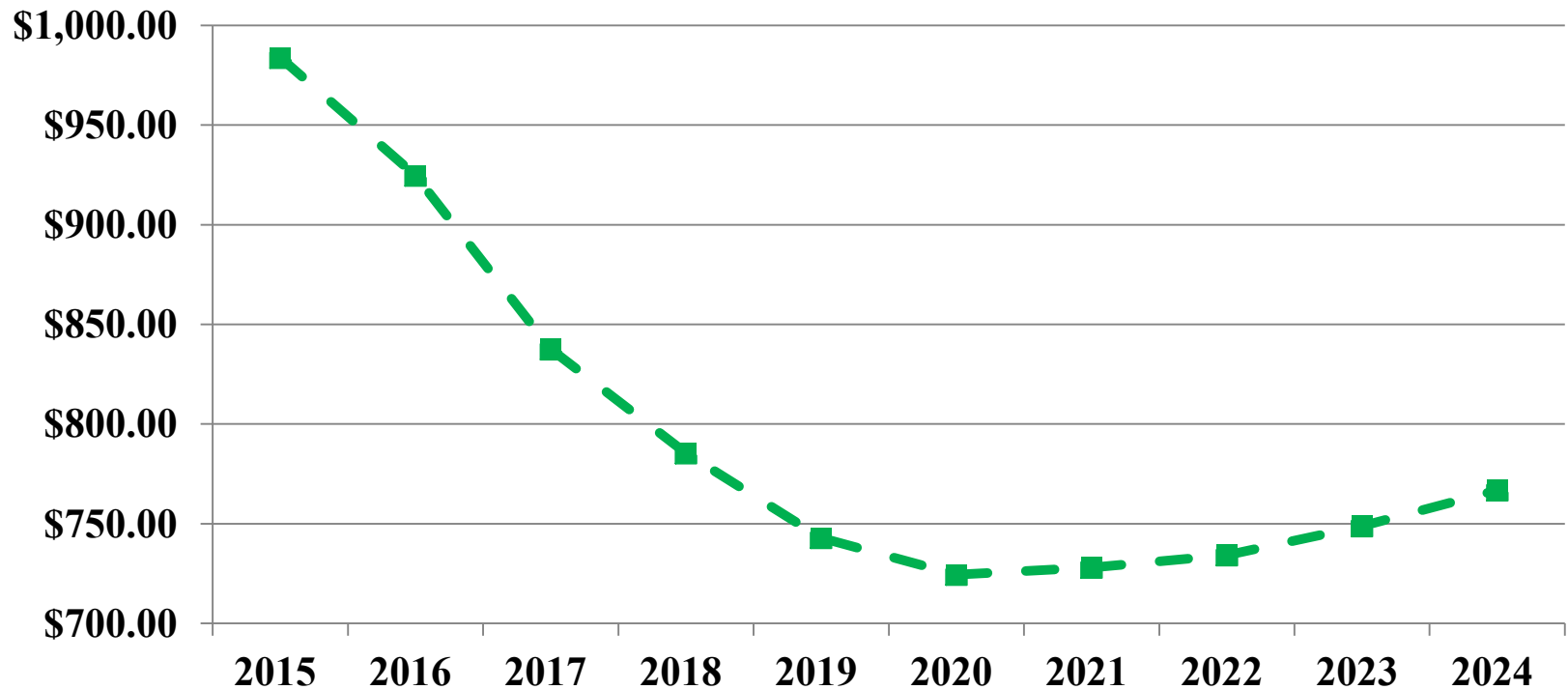


*The Projected Florida Financial Calf Production Costs Per Brood Cow were assumed to increase 2 percent annually.

Projected Profit/Loss Per Brood Cow

Florida Long-Term Profit Projections (2015-2024)

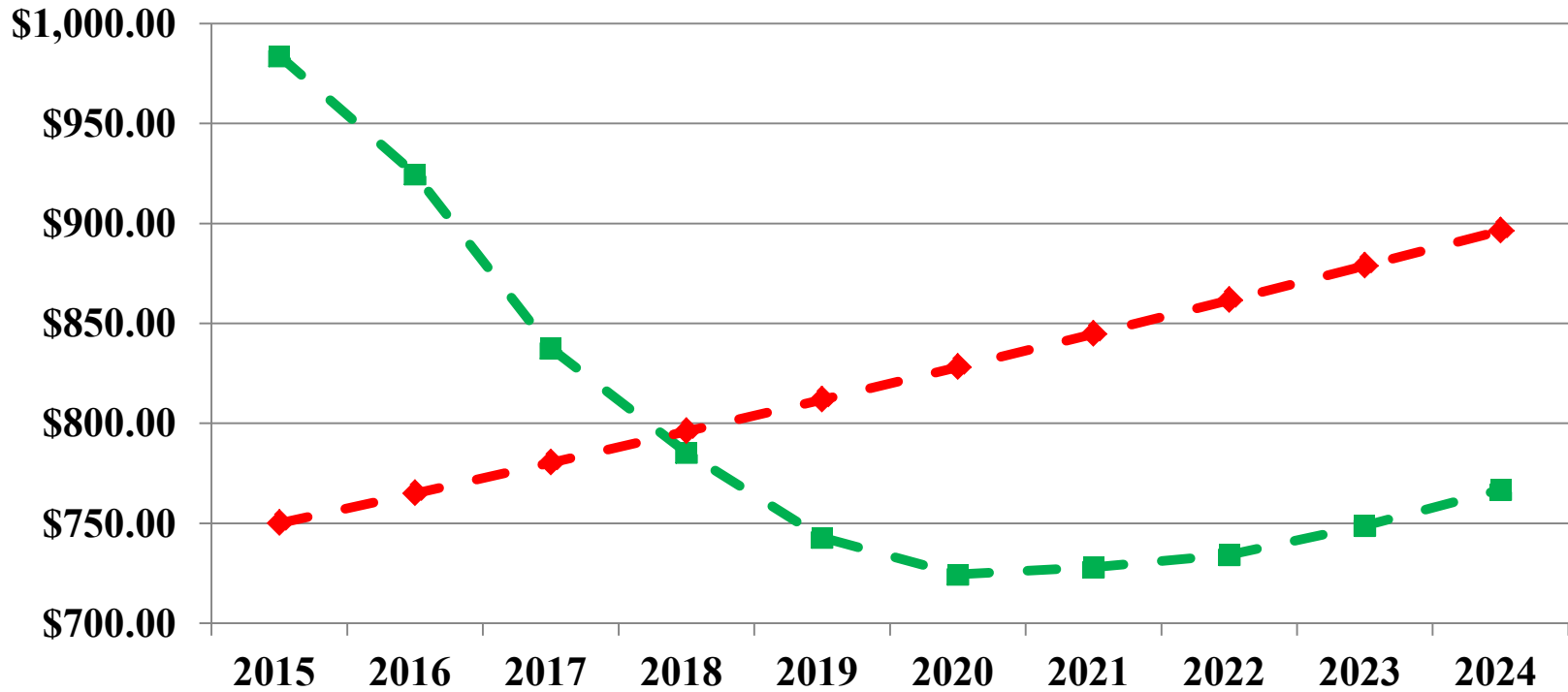
■ Feeder Calf Revenue/Brood Cow



Projected Profit/Loss Per Brood Cow

Florida Long-Term Profit Projections (2015-2024)

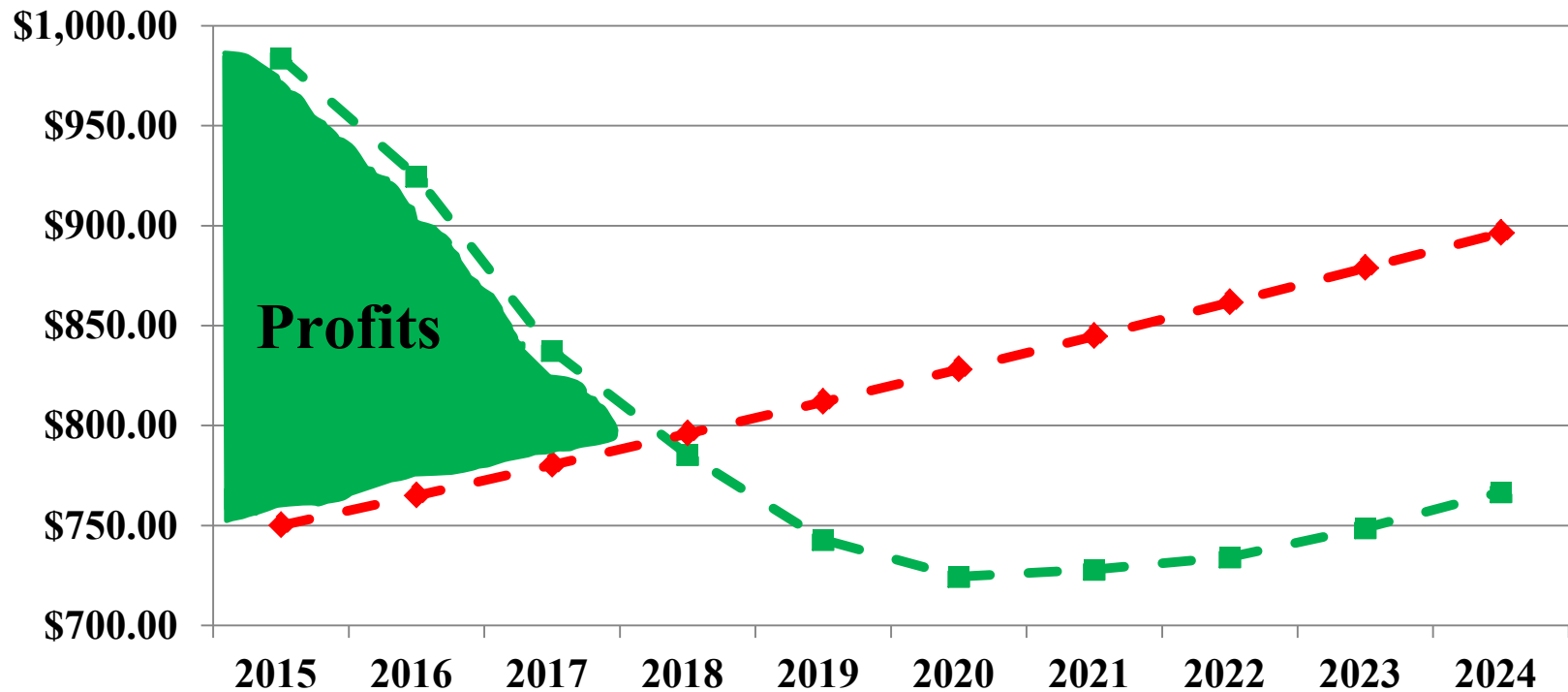
■ Feeder Calf Revenue/Brood Cow ◆ Calf Production Costs/Brood Cow



Projected Profit/Loss Per Brood Cow

Florida Long-Term Profit Projections (2015-2024)

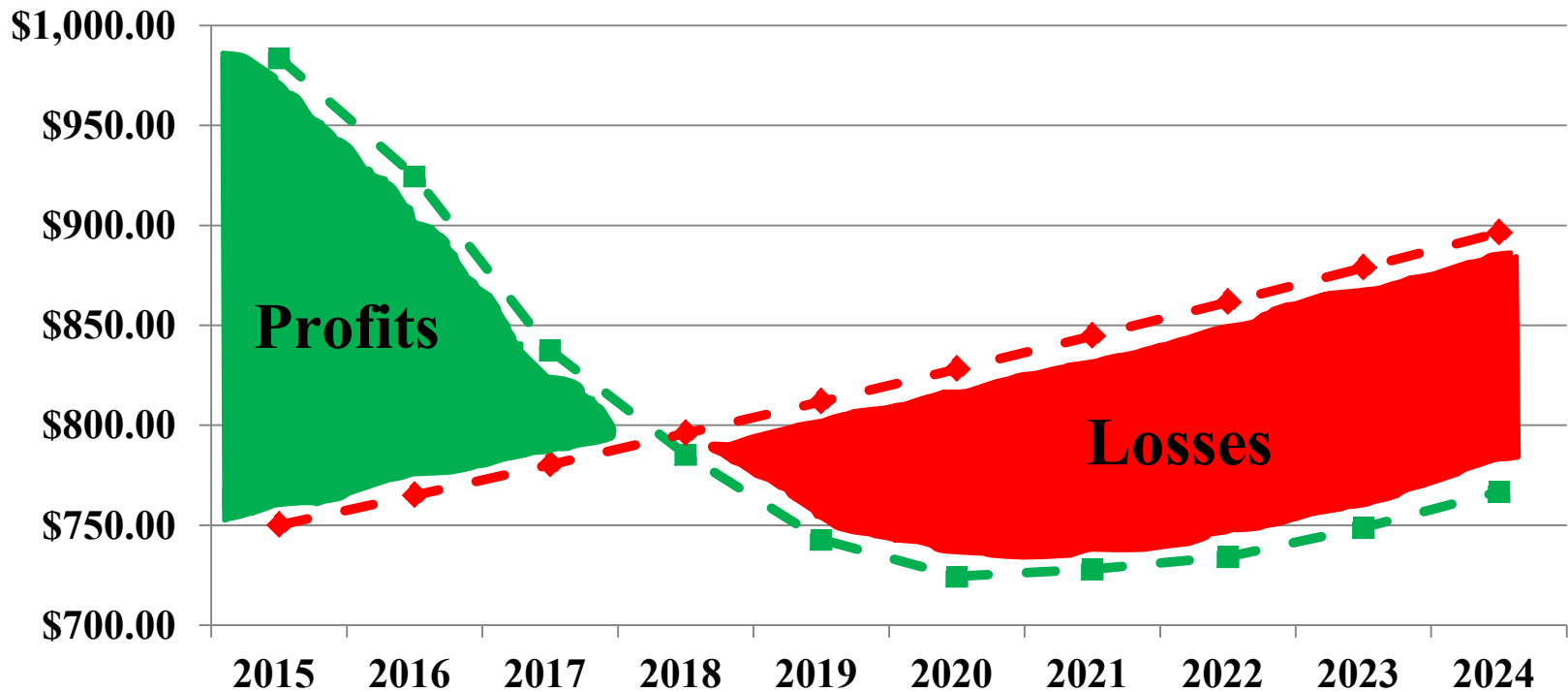
■ Feeder Calf Revenue/Brood Cow ◆ Calf Production Costs/Brood Cow



Projected Profit/Loss Per Brood Cow

Florida Long-Term Profit Projections (2015-2024)

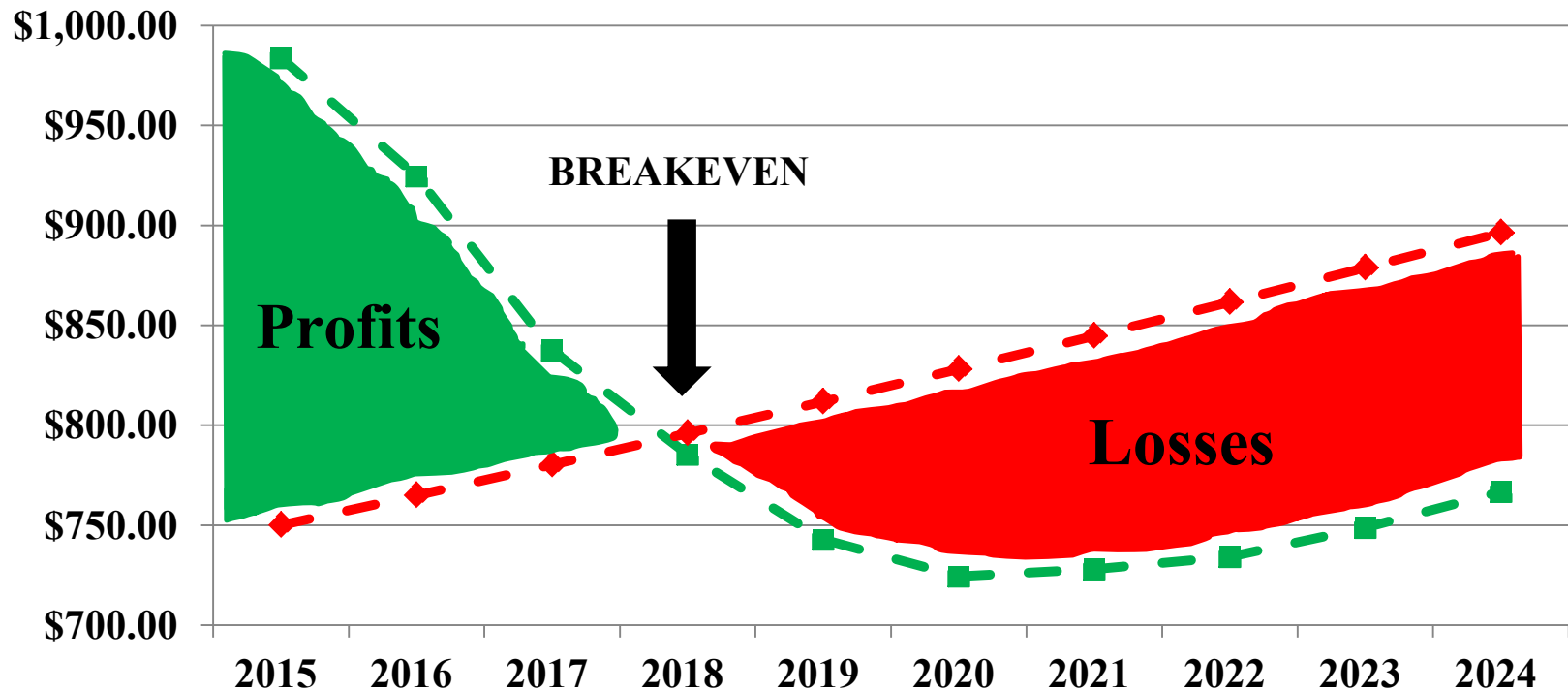
■ Feeder Calf Revenue/Brood Cow ◆ Calf Production Costs/Brood Cow



Projected Profit/Loss Per Brood Cow

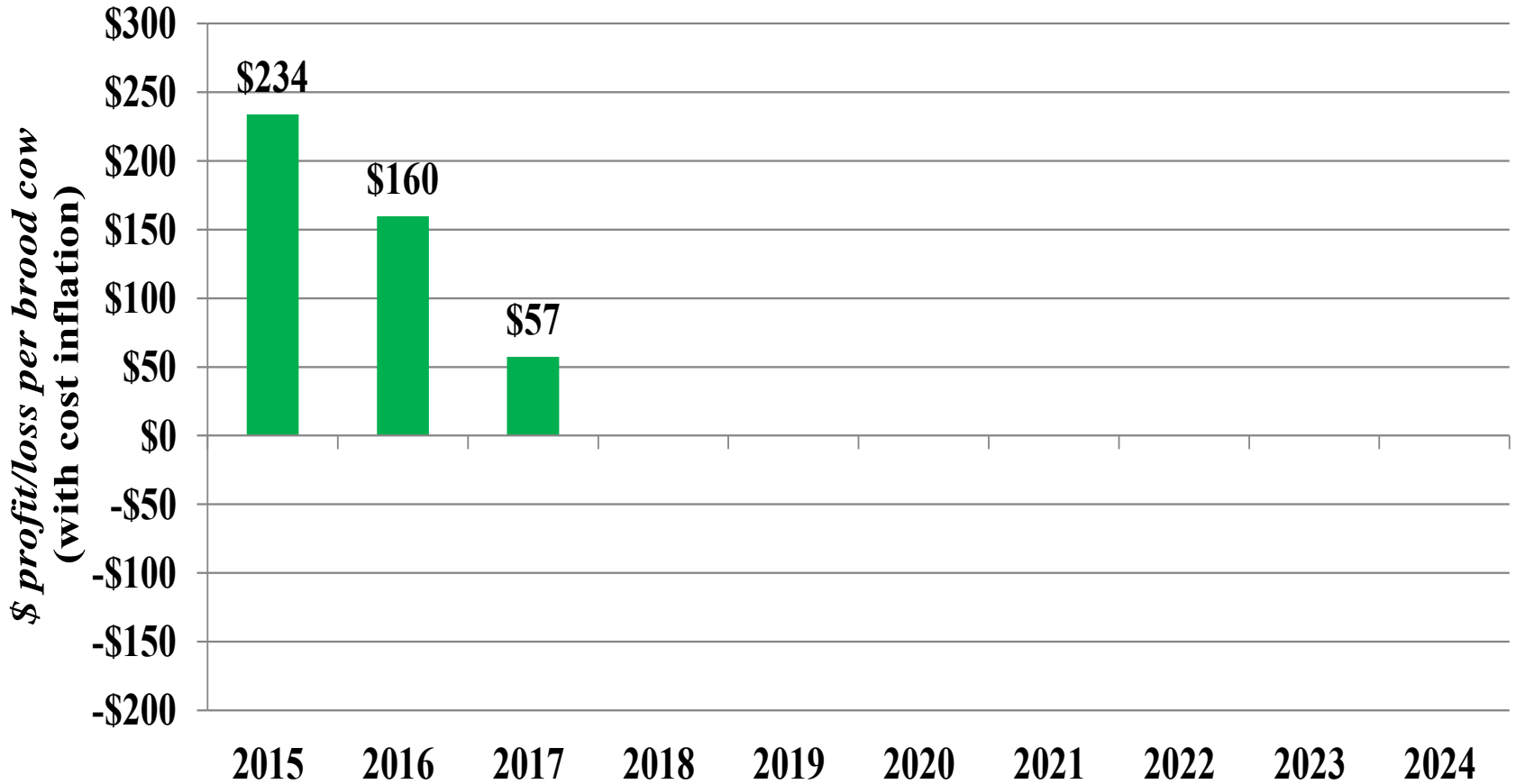
Florida Long-Term Profit Projections (2015-2024)

■ Feeder Calf Revenue/Brood Cow ◆ Calf Production Costs/Brood Cow



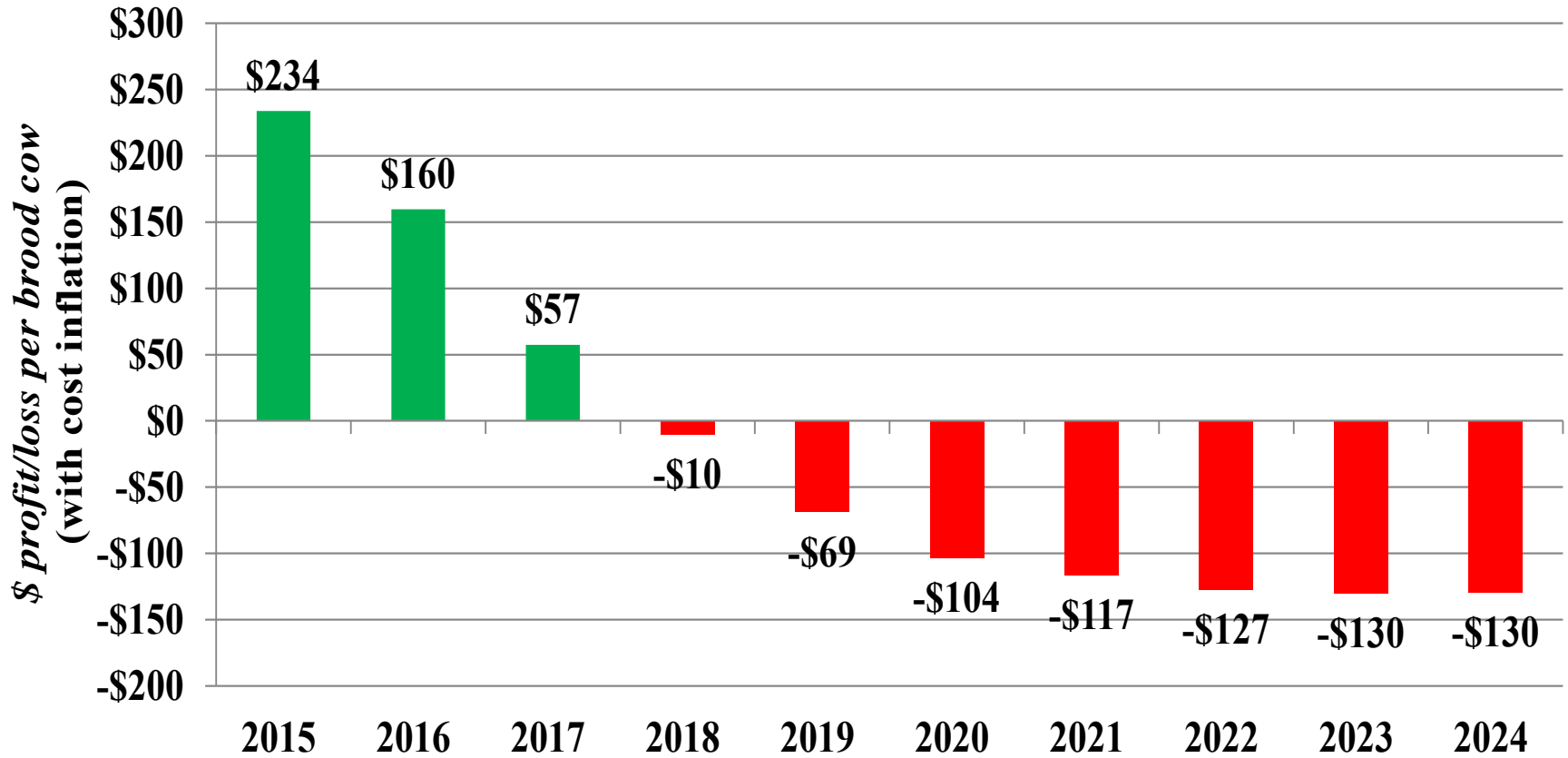
Projected Florida Profit/Loss Per Brood Cow

500-550 lbs., 10-Year Profit Projections (2015-2024)



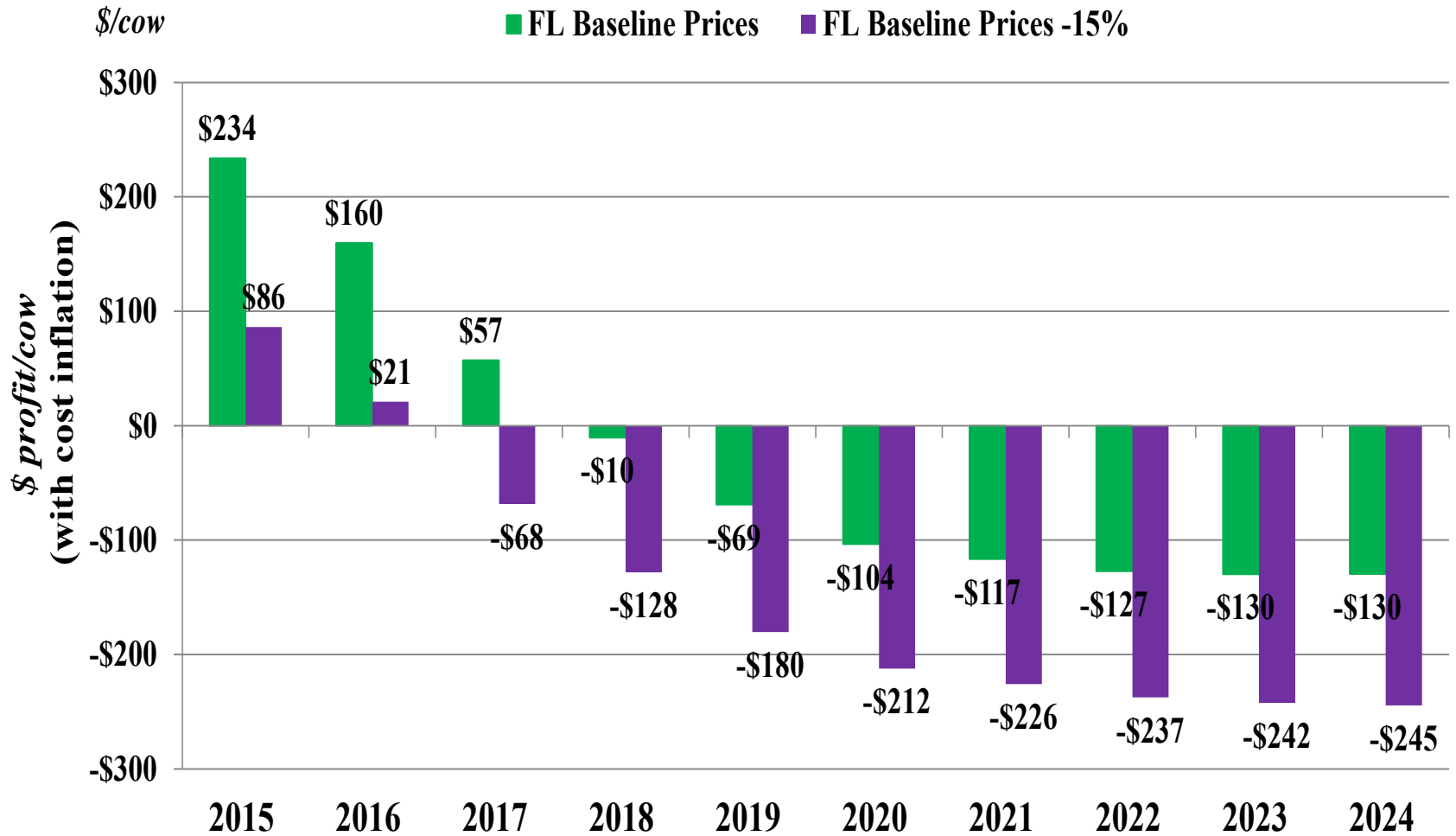
Projected Florida Profit/Loss Per Brood Cow

500-550 lbs., 10-Year Profit Projections (2015-2024)



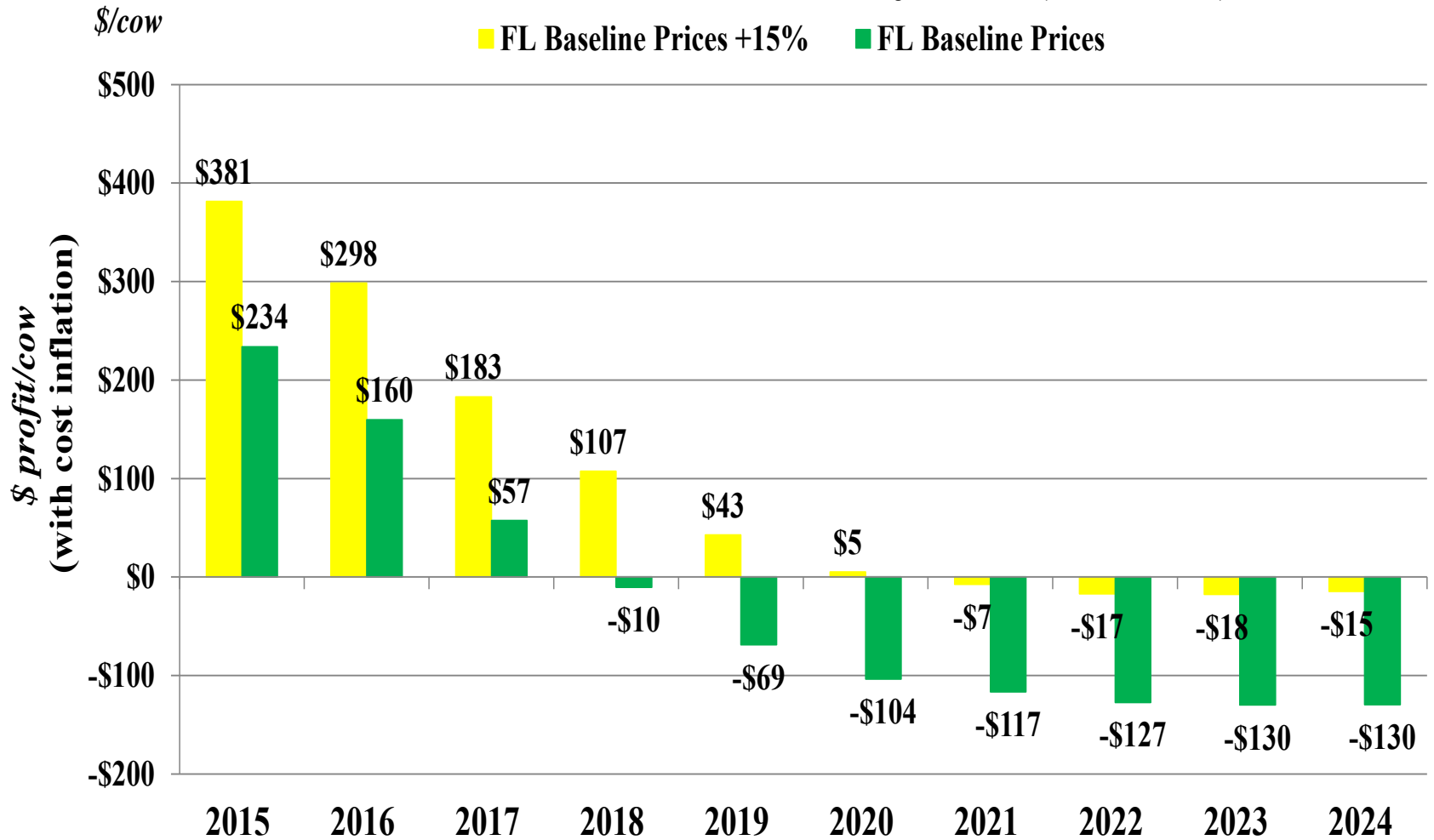
Projected Florida Profit/Loss Per Brood Cow

500-550 lbs., 10-Year Profit Projections (2015-2024)



Projected Florida Profit/Loss Per Brood Cow

500-550 lbs., 10-Year Profit Projections (2015-2024)



The Economics of Herd Expansion

Future Cow-Calf Management Strategies:

- ✓ **Work on increasing production levels per brood cow.**
 - **LBS. OF CALF PRODUCTION PER BROOD COW**
 - **Getting More Cows BRED**
 - **REDUCING the Number of Open Cows**
 - **Weaning Heavier Calves**
 - **Selling Heavier Calves**

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Future Cow-Calf Management Strategies:

- ✓ **Work on lowering or controlling production costs per brood cow.**
 - **Increasing the Number of Days of Grazing**
 - **Increasing the Stocking Rate (*acres/head*)**
 - **Stockpiling Forages**
 - **Competitively Buying Inputs**
 - **Reducing Waste!**

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Future Cow-Calf Management Strategies:

- ✓ **Work on improving feeder calf and cull animal prices received.**
 - **Improving Quality**
 - **Frame Score**
 - **Muscle Score**
 - **Marketing Practices**
 - **Weight**
 - **Timing**
 - **Marketing Outlet**

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Future Cow-Calf Management Strategies:

- ✓ **Work on increasing production levels per brood cow.**
- ✓ **Work on lowering or controlling production costs per brood cow.**
- ✓ **Work on improving feeder calf and cull animal prices received.**
- ✓ **Some combination of the above cow-calf management strategies.**

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