

# Agriculture By the Numbers

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NDSU Extension Agribusiness and Applied Economics

Farm Land Values Make  
Big Gains from 2021 - 2022

Breakdown of Agricultural  
Funding in the Inflation  
Reduction Act

Record First-Half Beef  
Exports Support Cattle  
Prices

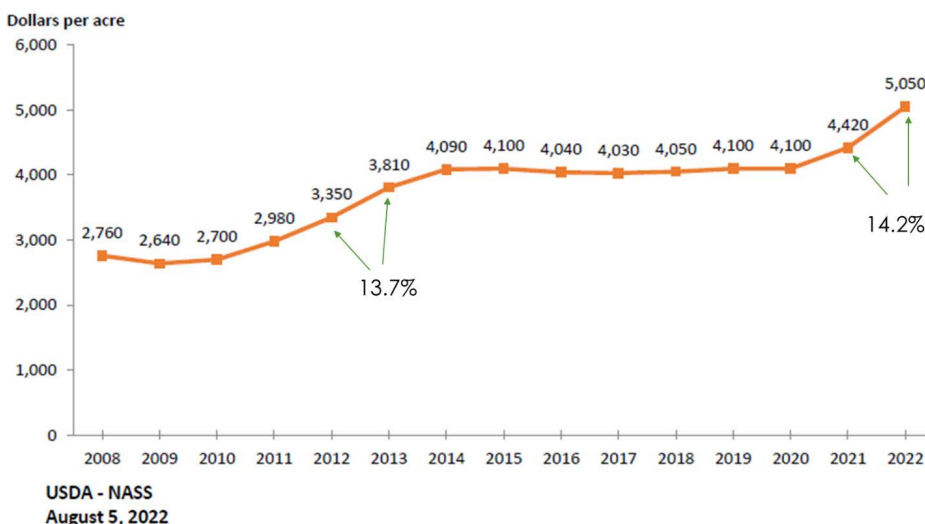
## Farm Land Values Make Big Gains from 2021 - 2022

By Bryon Parman

According to the Aug. 5, 2022 U.S. Department of Agriculture report on land values, cropland values nationally increased from \$4,420 per acre to \$5,050 per acre, increasing nearly 14.2%. This represents the largest increase in cropland prices nationally since 2012 to 2013 when cropland values increased 13.7% in one year. This comes after an increase from 2020 to 2021 of 7.8%. Since the start of the COVID-19 pandemic in 2020, cropland prices have increased a total of 23.2%.

The increases in 2021 and now 2022 are the first cropland value increases since 2013-2014. From 2014 to 2020, national average cropland prices remained flat hovering around \$4,100 per acre for almost 6 years.

### Average Cropland Value — United States: 2008-2022



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National pastureland prices have increased as well since 2020. According to USDA data, from 2020 to 2021, national average pastureland prices increased 5.7%. Then from 2021 to 2022, pastureland prices increased 11.5%. In total, from 2020 to 2022, pastureland

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## Farm Land Values Make Big Gains from 2021-2022

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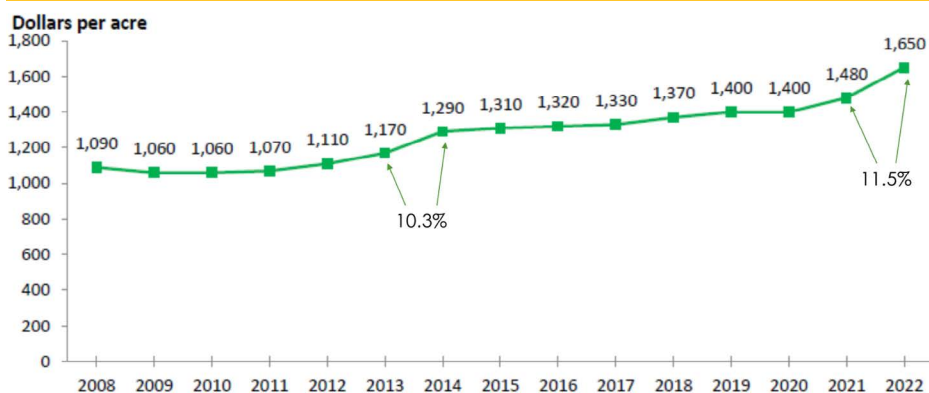
prices have increased a total of 17.9% nationally. The increase in pastureland prices from 2021 to 2022 is larger than the increase that occurred from 2013 to 2014 when feeder cattle prices neared \$3 per pound. While pastureland prices had not remained entirely flat from 2014 to 2020 as compared to cropland prices nationally, the yearly increase had been a modest 1.37%.

In North Dakota specifically, land prices for cropland were up 10.9% from 2021 to 2022, which was below the national average of 14.2%. Pastureland values in North Dakota, however, saw a nearly identical increase compared to the national average at 11.5%.

While net farm incomes for 2020, 2021, and the projections for 2022 are higher than they had been from the period of 2014 to 2019, when adjusted for inflation, they were not as far above average as they have been in the past. According to the USDA's February forecast, 2020 was actually near the 20-year average for net farm income while 2021 was projected to be 20% higher than average and 2022 about 13% higher than average. Compared to 2011-2013 where net farm incomes were between 20% and 40% higher than average when inflation is considered, the period of 2020-2022 is more like the early 2000s than the income levels reached 10 to 12 years ago.

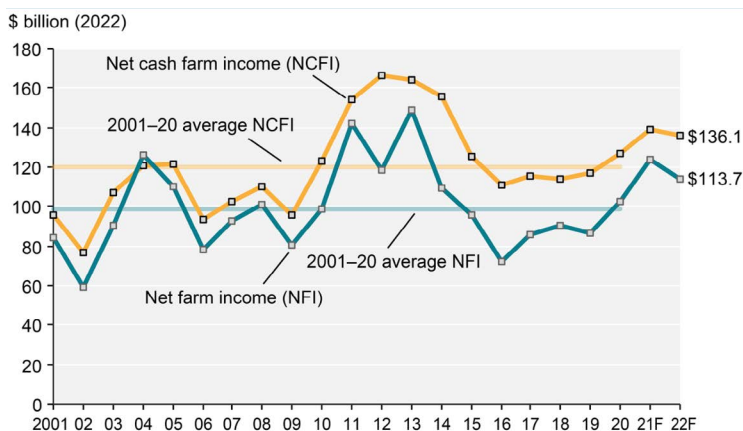
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### Average Pasture Value — United States: 2008-2022



USDA - NASS  
August 5, 2022

### U.S. Net Farm Income and Net Cash Farm Income, Inflation Adjusted, 2001-22F

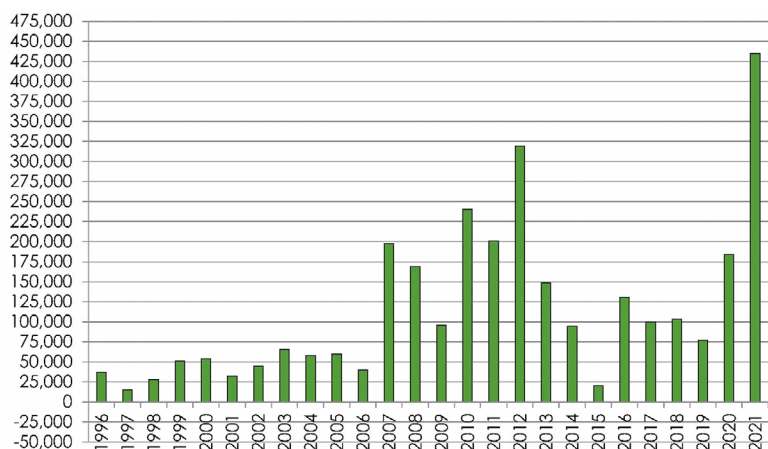


Note: F = forecast. Values are adjusted for inflation using the U.S. Bureau of Economic Analysis Gross Domestic Product Price Index (BEA API series code: A191RG) rebased to 2022 by USDA, Economic Research Service.  
Source: USDA, Economic Research Service, Farm Income and Wealth Statistics.  
Data as of February 4, 2022.

# Farm Land Values Make Big Gains from 2021-2022

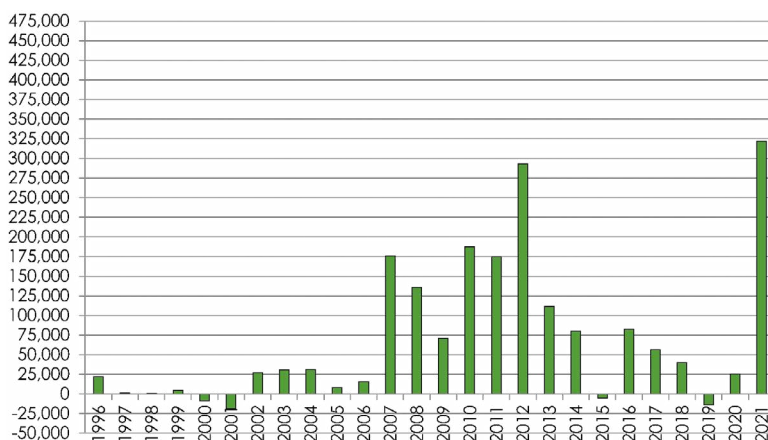
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**Figure 1: North Dakota Net Farm Income**



Aside from improved net farm incomes, one of the things that has likely driven up land prices are low interest rates making borrowing cheap over the last several years. The other is that much of the assistance from the federal government, including Market Facilitation 1 and 2 (MFP) as well as the Coronavirus Food Assistance Program (CFAP), all came in the form of direct cash payments. In other years, when net farm incomes were high (or much higher than 2020 and 2021) a lot of that income was in the form of either equity appreciation of farm land or the value of crop inventory. In the case of 2019 and 2020, a large share of income came in the form of a cash payment. With 2021 being a strong year for commodity prices, and two prior years of program benefits coming in the form of cash, many farmers have opted to use any surplus cash to buy land.

**Figure 2: North Dakota Net Farm Income Excluding Government Payments**



Cash rents for cropland also have increased as well, though not as much as land values. In North Dakota specifically, statewide cropland cash rents increased 3.1% from 2021 to 2022 while pastureland rents stayed flat. Nationally, cropland rents were 5% while pasture land rents were up 7.7%. It is likely that the reason North Dakota pastureland values did not increase at all is the severe drought in areas where cattle operations are located. A lack of forage going into 2022 discouraged any upward adjustments in pasture rental rates despite upward momentum nationally.

There may be some cooling off however for the 2022 to 2023 period. For one thing, the Federal Reserve has increased the federal funds rate several times this year and has indicated it plans to increase it more in the coming months. This has pushed long term mortgage rates up to between 5% and 6% which is nearly double what they were a year ago. The USDA is also expecting net farm incomes lower once 2022 is finalized, mainly due to much higher costs of production. Additionally, many who had cash reserves from the previous program payments have made their purchases and aren't in the market for more land anymore. Finally, it is likely that production cost increases may discourage more land purchases as additional land may require the acquisition of additional machinery and equipment which have increased in price considerably over the last two years.

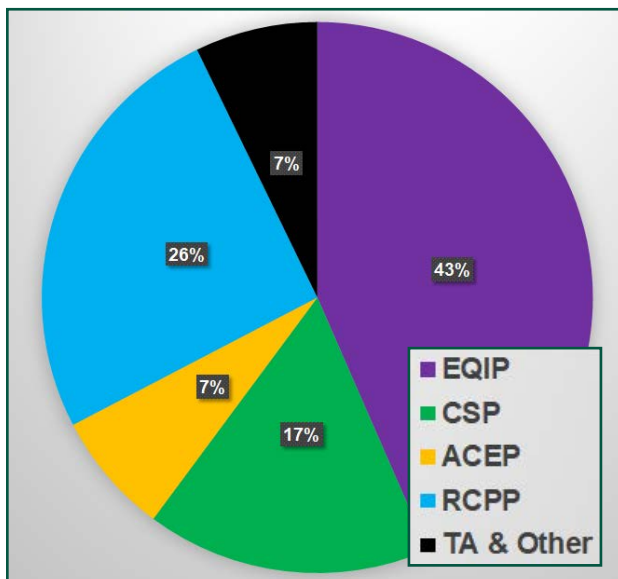
# Breakdown of Agricultural Funding in the Inflation Reduction Act

Ron Haugen, NDSU Extension

The Inflation Reduction Act of 2022 will provide nearly \$44 billion in funding to agricultural conservation, rural development and forestry programs as follows:

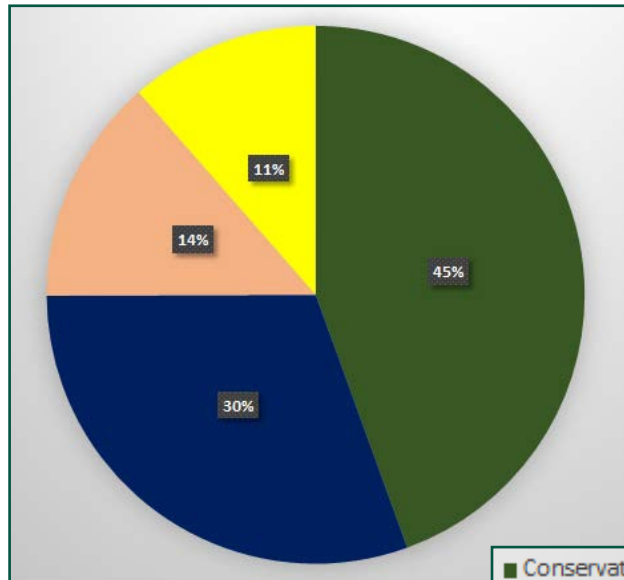
- Focus on agricultural easements
  - Reduce, capture, avoid or sequester carbon dioxide, methane or nitrous oxide emissions
- Focus on agricultural projects
  - Soil carbon improvement
  - Reduced nitrogen losses
  - Reduce, capture, avoid or sequester carbon dioxide, methane or nitrous oxide emissions
- Agricultural credit
  - Debt relief and assistance for underserved farmers and ranchers
- Rural development/renewable energy
  - Electric generation from renewables, including storage projects
  - REAP funding
  - Biofuel infrastructure
  - Rural cooperative financial assistance
- Forestry
  - Forest management, planning and restoration on federal and nonfederal forests

More graphs and tables on page 5.



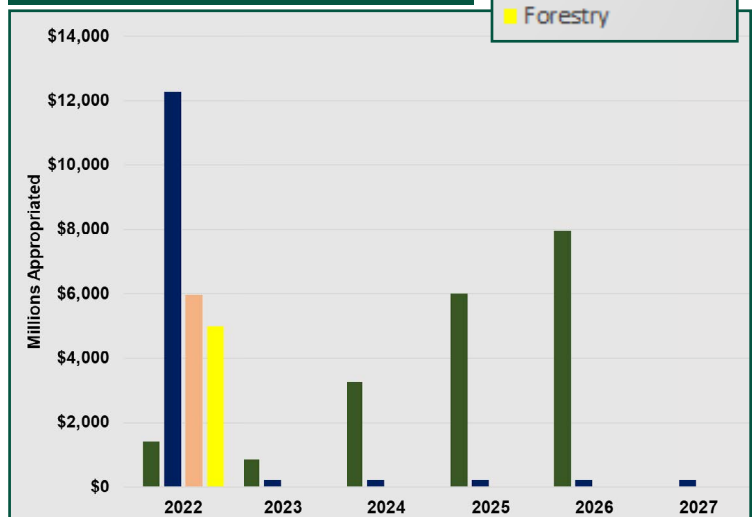
## Inflation Reduction Act of 2022

Agriculture Committee Funding



## Inflation Reduction Act of 2022

Agriculture Committee Funding by Category and Fiscal Year



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## Inflation Reduction Act of 2022

Breakdown of Conservation Programs

EQIP: Environmental Quality Incentives Program  
 CSP: Conservation Stewardship Program  
 ACEP: Agricultural Conservation Easement Program  
 RCPP: Regional Conservation Partnership Program

# Breakdown of Agricultural Funding in the Inflation Reduction Act

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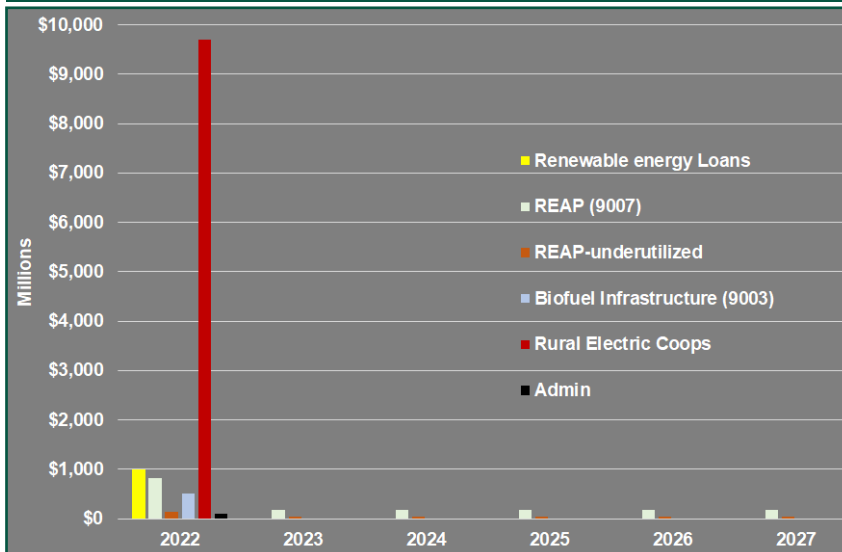
Credits: University of Illinois, University of Nebraska

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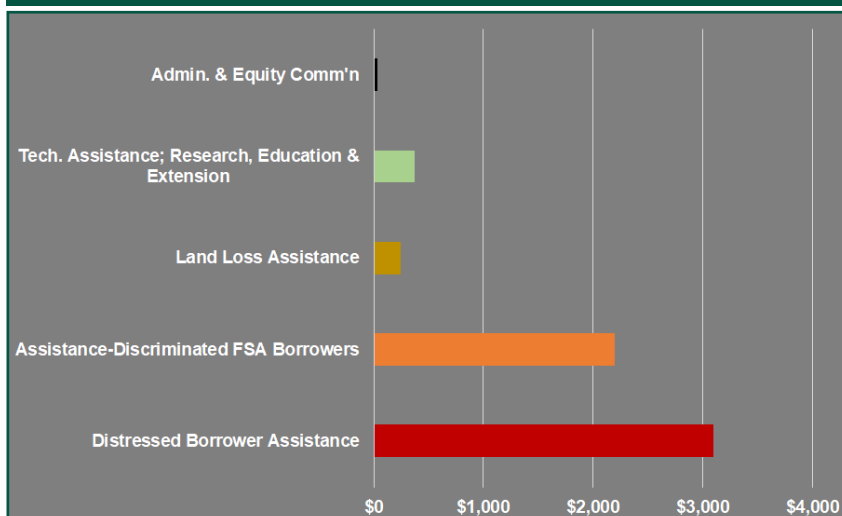


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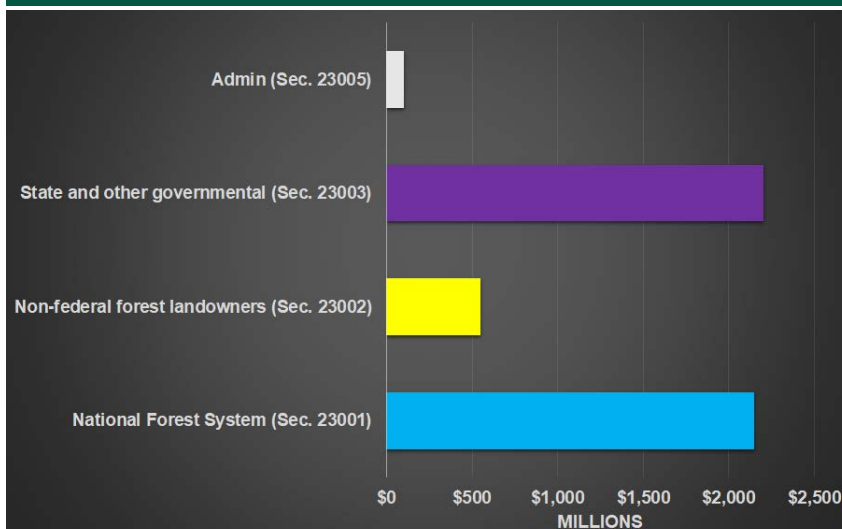
## Funding for Rural Development Programs Inflation Reduction Act of 2022



## Funding for At-Risk FSA Borrowers Inflation Reduction Act of 2022 (Millions)



## Funding for Forestry Programs and Projects Inflation Reduction Act of 2022



# Record First-Half Beef Exports Support Cattle Prices

Tim Petry, Extension Livestock Marketing Economist

The 2022 beef export market continued on a record high pace both on a volume and value basis. The most recent beef export numbers for January through June were released on Aug. 5.

The United States Department of Agriculture Economic Research Service (ERS) publishes monthly and annual U.S. livestock and meat trade data by country. That report with historic data back to 1989 is available at [www.ers.usda.gov/data-products/livestock-and-meat-international-trade-data](http://www.ers.usda.gov/data-products/livestock-and-meat-international-trade-data).

The U.S. is the world's largest exporter of high-quality beef and beef on a value basis. Brazil does export a higher annual volume but it is low-quality beef.

Annual 2021 U.S. beef exports were record high at 3.45 billion pounds up 17% from 2020. Exports struggled in 2020 due to the worldwide COVID-19 pandemic. The previous record high year for exports was 2018 at 3.16 billion pounds. Beef export value records were also set in 2021.

Historically, the top U.S. beef export markets were Japan, South Korea, Mexico and Canada. In 2021, China quickly emerged as the third best market and that has continued in 2022. Exports to South Korea have been steadily increasing, which has allowed it to move up to the top spot in 2022 just slightly ahead of Japan.

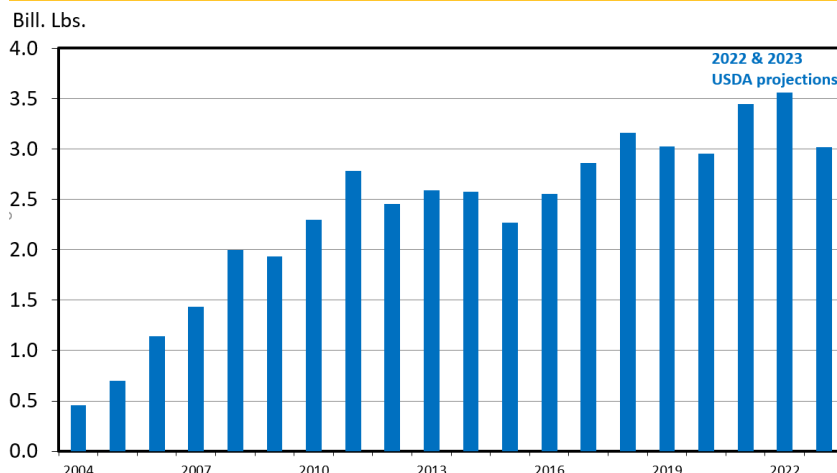
Beef exports in June totaled 315 million pounds, up 15.2% from June 2021. Gains in shipments to China (+19.8%), Japan (+18%), South Korea (+15.5%), and Canada (+4.6%), offset a slight decline to Mexico (-3.8%).

2022 beef exports have exceeded last year's record level in each of the first six months. January through June exports at 1.79 billion pounds were up 7.4% over last year's 1.66 billion pounds.

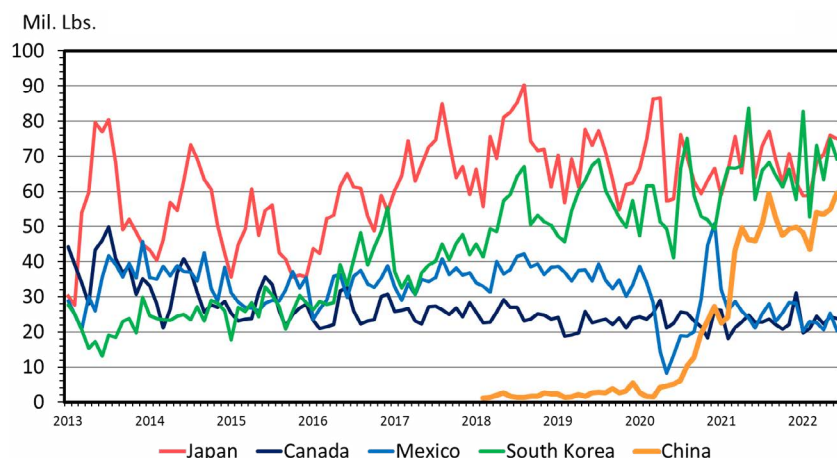
China led the growth in first-half beef exports with a 36% increase over last year. South Korea followed with a 4% increase, Japan and Canada were almost unchanged,

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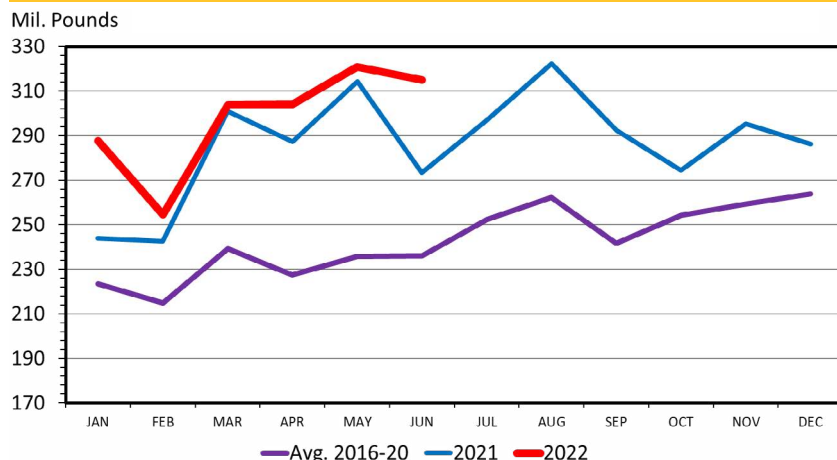
**U.S. Beef and Veal Exports**  
Carcass Weight, Annual



**U.S. Beef Exports to Major Markets**  
Carcass Weight, Monthly



**U.S. Beef and Veal Exports**  
Carcass Weight, Monthly



# Record First-Half Beef Exports Support Cattle Prices — continued from page 6



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but exports to Mexico declined 16.5%. Higher beef prices especially impacted the Mexican market.

The value of U.S. beef exports also exceeded last year's record level in each of the first six months. According to the U.S. Meat Export Federation ([www.usmef.org](http://www.usmef.org)), the value of beef exports in the first-half was \$5.56 billion – an increase of 34% over 2021. The 2022 value is on pace to significantly exceed last year's \$9.5 billion. When beef variety meats are added, the 2021 beef value at \$10.58 billion pounds exceeded \$10 billion for the first time.

USDA is forecasting 2022 beef exports at a record high 3.56 billion pounds, 3.3% over the previous record in 2021 of 3.45 billion pounds ([www.usda.gov/oce/commodity/wasde](http://www.usda.gov/oce/commodity/wasde)).

Record 2022 exports are the result of projected record high 2022 beef production at 27.99 billion pounds, buoyed by large beef cow and heifer slaughter and strong export demand, especially from South Korea and China.

USDA is forecasting beef exports to decline in 2023 to 3.02 billion pounds, based on cyclically declining beef production, higher cattle and beef prices, and a strong U.S. value. Beef production in 2023 is projected to decrease 6% to 26.3 billion pounds.

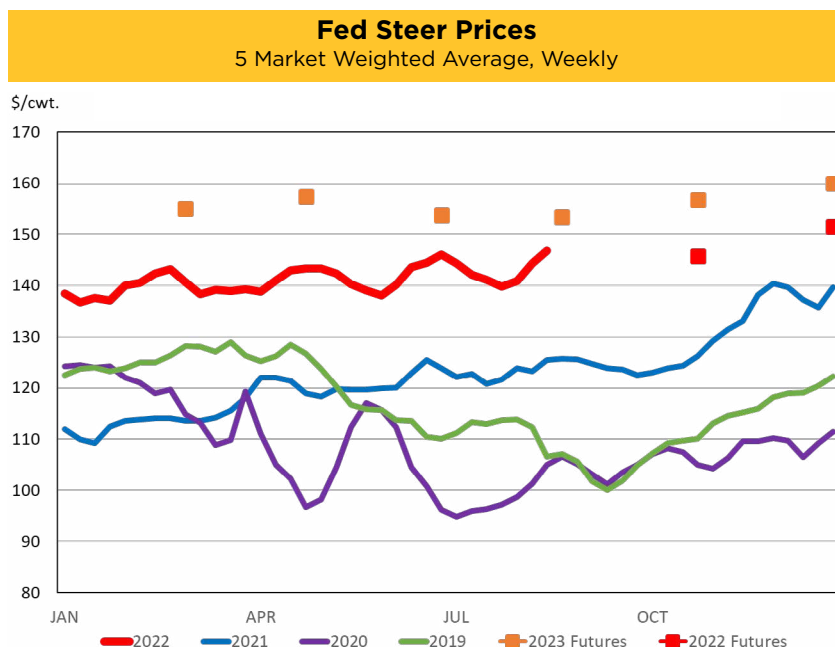
USDA expects annual fed cattle prices to average \$142.05 per hundredweight (cwt) in 2022 with an increase to \$153/cwt in 2023.

2023 beef exports could do better than USDA's somewhat conservative current projection, but many geo-political factors are currently causing unprecedented uncertainty

and volatility in U.S. and world agricultural and financial markets. For example, over the last several weeks, tensions have heightened between the U.S. and China concerning Taiwan.

A strong export market will be needed to support fed cattle prices. Live cattle futures prices trading about \$151/cwt in the December 2022 contract and \$158/cwt in the April 2023 contract are dependent on strong beef exports.

Feeder cattle futures trading about \$189/cwt in the November 2022 contract and \$194/cwt in the April 2023 contract are based on the higher fed cattle price forecasts and corn prices staying near current levels.



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