

Agriculture By the Numbers

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NDSU Extension Agribusiness and Applied Economics

Timeline for U.S. Tariffs on Canada, Mexico, and China are Important

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Timeline for U.S. Tariffs on Canada, Mexico, and China are Important

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On March 4, 2025, the Trump administration announced 25% tariffs on all products imported from Canada and Mexico and an additional 10% tariffs on all imports from China. The additional 10% tariffs on Chinese products are on top of the existing tariffs implemented during President Trump's first term and the new 10% tariffs added on Feb. 4.

On March 6, the import tariffs on Canadian and Mexican products covered under the United States- Mexico-Canada (USMCA) agreement were postponed until April 2. In addition, the import tariffs on Canadian potash were reduced from 25% to 10%. The 10% import tariff on Canadian crude oil and the additional 10% tariffs on all Chinese products will remain in effect.

Many farm managers are asking what the current and potential new tariffs might mean specifically for U.S. crop prices. The answer is that it depends. There are three key variables to consider: how much bulk grain U.S. imports from these countries, if these countries implement retaliatory tariffs on U.S. bulk grains and how long tariffs will be in place.

The U.S. does not import significant amounts of bulk grains like corn, soybeans and wheat from Canada, Mexico and China. The exceptions are durum wheat, canola, some pulse crops and canola oil from Canada. The U.S. does purchase significant amounts of fruits, vegetables and fruit juices from Mexico and small levels of aquaculture products from China. The direct impact of U.S. tariffs on U.S. bulk grain prices will be minimal.

However, the potential impacts of retaliatory tariffs are much greater. The Chinese government has announced additional 15% import tariffs on U.S. wheat, corn, cotton and chicken. They have also announced additional 10% tariffs on U.S. soybeans, sorghum, pork, beef, fruits, vegetables and aquatic products.

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Timeline for U.S. Tariffs on Canada, Mexico and China are Important — continued from page 1

As of the writing of this article (March 7), the Canadian government has paused its proposed retaliatory tariffs on about \$107 billion of U.S. products. The Canadian government provided an initial list of products subject to retaliatory tariffs; agricultural products included wheat (both spring wheat and durum), canola, barley, rye, oats, sunflower, sugar, milk and dairy products, eggs and poultry. The Mexican government has not provided a list of specific U.S. products that would have import tariffs implemented.

For context, Tables 1-4 summarize U.S. corn, soybean and all wheat and spring wheat export sales by country. The four columns under the Annual Export Sales section are the marketing year totals for each crop. The two columns on the right, under the Year-to-Date Export Commitments section, list the accumulated export sales from the beginning of the marketing year until the date listed. The 2024/2025 marketing year is the current year's sales and the 2023/2024 marketing year represents the accumulated sales for the same period last year.

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Table 1 – U.S. Corn Export Sales by Country

| Country | Annual Export Sales | | | | Year to Date Export Commitments | |
|--------------|---------------------|-----------------|-----------------|-----------------|---------------------------------|-----------------------|
| | 2020/21 | 2021/22 | 2022/23 | 2023/24 | 2023/24 (02-29-24) | 2024/25 (02-27-25) |
| Mexico | 14,818.3 | 16,689.5 | 14,826.1 | 21,722.8 | 17,290.4 | 17,859.4 |
| Japan | 10,833.9 | 10,205.1 | 6,810.5 | 11,082.0 | 6,322.9 | 7,753.0 |
| Colombia | 3,950.2 | 4,393.3 | 2,433.0 | 6,323.2 | 3,943.9 | 5,005.8 |
| China | 21,389.9 | 14,348.4 | 7,543.0 | 2,808.3 | 1,780.7 | 32.3 |
| South Korea | 3,525.2 | 1,471.8 | 817.6 | 2,405.1 | 1,219.8 | 2,955.5 |
| Taiwan | 1,434.5 | 596.4 | 541.6 | 1,540.7 | 717.7 | 1,197.6 |
| ROW | 11,005.9 | 12,059.2 | 6,497.3 | 8,395.2 | 7,952.0 | 14,763.8 |
| Total | 66,957.9 | 59,763.7 | 39,469.1 | 54,277.3 | 39,227.4 | 49,567.4 |

ROW = Rest of World. USDA Export Sales report.

Table 2 – U.S. Soybean Export Sales by Country

| Country | Annual Export Sales | | | | Year to Date Export Commitments | |
|------------|---------------------|-----------------|----------------|----------------|---------------------------------|-----------------------|
| | 2020/21 | 2021/22 | 2022/23 | 2023/24 | 2023/24 (02-29-24) | 2024/25 (02-27-25) |
| China | 35,363.0 | 30,219.0 | 31,380.8 | 24,306.7 | 22,393.0 | 21,156.0 |
| Mexico | 4,720.5 | 5,445.0 | 4,569.2 | 4,737.7 | 3,948.8 | 3,863.6 |
| Indonesia | 2,318.8 | 1,808.3 | 1,791.0 | 2,131.0 | 1,259.0 | 1,126.4 |
| Japan | 2,133.7 | 2,412.1 | 2,249.9 | 2,031.6 | 1,694.7 | 1,489.4 |
| Spain | 990.6 | 1,385.1 | 1,600.1 | 1,904.4 | 1,904.4 | 1,787.6 |
| Germany | 1,186.6 | 1,411.7 | 2,180.6 | 1,687.3 | 909.0 | 868.1 |
| Egypt | 2,777.4 | 4,082.4 | 1,149.0 | 1,452.3 | 482.2 | 2,448.8 |
| ROW | 11,079.9 | 10,425.3 | 7,286.9 | 6,259.1 | 6,698.9 | 11,646.2 |

ROW = Rest of World. USDA Export Sales report.

Timeline for U.S. Tariffs on Canada, Mexico and China are Important — continued from page 2

Table 3 - U.S All Wheat Export Sales by Country

| Country | Annual Export Sales | | | | Year to Date Export Commitments | |
|--------------|---------------------|-----------------|-----------------|-----------------|---------------------------------|-----------------------|
| | 2020/21 | 2021/22 | 2022/23 | 2023/24 | 2023/24 (02-29-24) | 2024/25 (02-27-25) |
| Mexico | 3,459.2 | 3,569.9 | 3,160.5 | 3,154.0 | 2,930.3 | 3,889.4 |
| Philippines | 3,174.7 | 2,638.7 | 2,032.7 | 2,809.3 | 2,722.3 | 2,512.1 |
| China | 3,212.5 | 847.9 | 1,159.9 | 2,112.9 | 2,471.6 | 139.1 |
| Japan | 2,430.9 | 2,353.0 | 2,059.1 | 1,961.7 | 1,826.7 | 1,948.6 |
| South Korea | 1,807.7 | 1,228.6 | 1,241.2 | 1,353.0 | 1,346.6 | 2,177.8 |
| Taiwan | 1,149.9 | 922.5 | 758.8 | 1,082.4 | 996.5 | 953.8 |
| ROW | 9,571.7 | 7,108.3 | 7,346.3 | 6,056.4 | 6,123.8 | 8,678.5 |
| Total | 24,806.6 | 18,668.9 | 17,758.5 | 18,529.7 | 18,417.8 | 20,299.3 |

ROW = Rest of World. USDA Export Sales report.

Table 4 - U.S. Hard Red Spring Wheat Export Sales by Country

| Country | Annual Export Sales | | | | Year to Date Export Commitments | |
|--------------|---------------------|-----------------|-----------------|-----------------|---------------------------------|-----------------------|
| | 2020/21 | 2021/22 | 2022/23 | 2023/24 | 2023/24 (02-29-24) | 2024/25 (02-27-25) |
| Philippines | 1,856.3 | 1,447.6 | 1,133.5 | 1,613.6 | 1,596.3 | 1,231.4 |
| Mexico | 506.8 | 525.3 | 756.9 | 1,010.9 | 1,061.8 | 1,091.8 |
| Japan | 936.0 | 812.4 | 605.9 | 663.8 | 619.0 | 540.8 |
| Taiwan | 638.7 | 517.5 | 488.2 | 661.1 | 617.8 | 608.0 |
| South Korea | 431.9 | 405.8 | 402.1 | 492.4 | 484.9 | 409.1 |
| Vietnam | 314.2 | 75.5 | 236.0 | 309.4 | 305.8 | 204.8 |
| ROW | 2,816.2 | 1,469.6 | 1,759.3 | 1,562.6 | 1,529.2 | 2,423.6 |
| Total | 24,806.6 | 18,668.9 | 17,758.5 | 18,529.7 | 18,417.8 | 20,299.3 |

ROW = Rest of World. USDA Export Sales report.

Mexico is the largest U.S. corn and all-wheat buyer and the second-largest soybean and spring wheat buyer. China is the largest U.S. soybean buyer, but export sales have been dropping since the 2020/2021 marketing year peak. The 2020/2021 marketing year includes the additional sales agreed upon in the Phase One trade agreement with China. Chinese imports of U.S. corn and wheat in the current marketing year are very low. Historically, Canadian purchases of U.S. corn, soybeans, and wheat are low relative to the countries listed in these tables.

Forecasting the price impacts of tariffs and retaliatory tariffs is very difficult. The cost of alternative crop sources and the efficiency of

alternative supply chains will have a dramatic impact on whether the importing country will either pay the new tariffs and buy U.S. grains or look to other suppliers.

The longer tariffs are in place, the more alternative supply chains become efficient and embedded, and the more difficult it will be for the market to shift back to the previous systems. If the tariffs are removed quickly, supply chains will likely transition back to the previous system and prices will return to their previous levels.

Economic Potential for Grazing Irrigated Annual Forage with Stocker Cattle in Western North Dakota

Jon T. Biermacher, Extension Livestock Development Specialist and
James K. Rogers, Extension Forage Crops Development Specialist

At a time when cattle prices are at all-time highs and row crop prices are expected to be below total cost of production, some crop producers, including those who grow crops under irrigation, wonder if it makes economic sense to use some of their cropland acres to establish annual forages and graze them with lightweight stocker cattle. We conducted a benefit-cost analysis to determine the expected profitability for establishing an annual cereal-based forage using irrigation on 130 acres of cropland common to western North Dakota.

In the analysis, we assume that a cereal forage mix of equal parts oats, wheat and barley would be no-till established on or near May 1, 2025, and would require 120 pounds/acre of forage seed, 120 pounds/acre of N, 60 pounds/acre of P_2O_5 and 60 pounds/acre of K_2O . We also assume that an irrigation water level would be similar to that of a typical irrigated wheat, barley or corn cash crop to produce enough pasture with enough quality to allow cattle to gain an average of 2.5 pounds/head/day.

We also assume that grazing would begin on or before June 20 and finish by the end of October, providing about 133 days of grazing. We also assume that forage would be stocked at 500 pounds of live body weight (BW) per acre and would utilize an average stocker steer with BW equal to 450 pounds/head, which would require a stocking rate equal to 1.1 head/acre, or 144 stockers for the entire 130 acres. We use lightweight steers because they tend to gain weight faster than heavier (600 to 700 pounds/head) cattle, which is important when the grazing period is limited.

We also assume that cattle would be purchased from a local salebarn and, after grazing, would be sold back to the same salebarn. Transportation costs were calculated, assuming a distance of 30 miles between the farm and the salebarn at a price equal to \$4 per mile. We assume the farmer would not have fence and water infrastructure needed for stocker cattle grazing. Therefore, we include the costs associated with a two-strand electrified polywire perimeter fence needed to contain stockers on the 130 acres of forage. Furthermore, it was assumed that the 130 acres under irrigation would

not have a water delivery system for beef cattle. Since irrigation is available, we assume that water is too, so we account for the cost of purchasing a 1,100-gallon cattle water tank, a gasoline-based water pump and a water hose needed to provide a source of fresh drinking water for cattle during the grazing period.

We used projected prices for beginning BW (450 pounds/head) and ending BW (783 pounds/head) cattle for the months of June (grazing initiation) and October (grazing termination). The beginning price of \$4.50/pound and ending price of \$2.75/pound were obtained from the NDSU publication, "Plotting a Course—Planning Prices," which reports short-term and long-term cattle prices for the 2025 production year and adjusted them to reflect the beginning and ending months of grazing. The publication can be found at [ndsu.ag/plottingcourse](https://www.ndsu.edu/plottingcourse). Prices for all the variables used in the analysis are reported in Table 1.

Base-case values for gross revenue, costs of production and net return to land, labor management and overhead on a \$/head, \$/acre, and \$/operation basis are reported in Table 2. Based on our assumptions about initial and ending weights and prices, gross revenue from this grazing system for the 2025 grazing period is expected to be \$141/acre (\$127/head). These cattle are expected to realize a respectable amount of total gain (333 pounds/head) over the grazing period; however, the projected record-high cattle purchase and sale prices are essentially canceling each other out. As a result, the total value of this gain is only expected to be \$0.38/pound. In comparison, the total production costs are expected to be about \$487/acre (or \$438/head), with a cost of gain equal to about \$1.32/pound. Although we have not accounted for 100% of all the agronomic and animal-related expenses, we feel that we have accounted for most of the essential costs expected for such an enterprise. We also feel that our estimates for these costs are fairly conservative. Overall, the net return to land, labor, management and farm overhead is not economically attractive at -\$346/acre (or -\$312/head).

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Economic Potential for Grazing Irrigated Annual Forage with Stocker Cattle in Western North Dakota – continued from page 4

Table 1. Economic Prices Used in the Forage Grazing System Benefit-Cost Analysis

| Economic variables | Value |
|---|--------|
| Purchase price of stocker cattle (\$/pounds) | 4.50 |
| Sale price of stocker cattle (\$/pounds) | 2.75 |
| Price of small grain seed (\$/pounds) | 0.33 |
| No-till drill (\$/acre) | 17.5 |
| Price of N (46-0-0) (\$/pounds) | 0.57 |
| Price of P2O5 (18-46-0) (\$/pounds) | 0.79 |
| Price of K2O (0-0-60) (\$/pounds) | 0.55 |
| Custom rate for applying fertilizers (\$/acre) | 10.00 |
| DIRTI-5 rate used to calculate annual fixed costs (%) | 20.00% |
| Transport cost (\$/mile) | 4.00 |
| Cattle marketing, yardage, and other transactions costs (\$/head) | 25.00 |
| Interest rate for operating loans (%) | 7.50% |
| Livestock Risk Protection (\$/head) | 65.00 |
| Utilities (electric, fuel, oil, etc.) (% of initial value of animal) | 10.00% |
| Death rate (%) | 1.00% |
| Mineral, salt (\$/head) | 0.50 |
| Purchase price of 2-strand electrified polywire fence (\$/1,320 foot) | 391.32 |
| Purchase price of 1,100-gallon cattle water tank (\$/tank) | 1,000 |
| Purchase price for a gasoline-based portable water pump and hose (\$) | 700 |
| Price of fuel (\$/gallon) | 2.75 |

Table 2. Expected Revenue, Costs, and Net Return to Land, Labor, Management and Overhead for an Irrigated Cereal Forage Stocker Cattle Grazing System in North Dakota

| Gross revenue: | \$/head | \$/acre | \$/operation |
|--|----------------|----------------|----------------|
| Beginning value (\$/head) | 2,025.00 | 2,250.00 | 292,500 |
| Ending value (\$/head) | 2,151.88 | 2,390.97 | 310,826 |
| Gross revenue (\$/head) | 126.88 | 140.97 | 18,326 |
| Costs for forage and grazing: | \$/head | \$/acre | \$/operation |
| Forage seed cost | 51.75 | 57.50 | 7,475 |
| Fertilizers N, P2O5, K2O | 143.30 | 159.22 | 20,698 |
| Mineral, salt | 0.50 | 0.56 | 72 |
| Transporting stockers | 15.89 | 17.65 | 2,295 |
| Marketing (commission, inspection, check off, etc.) | 25.00 | 27.78 | 3,611 |
| Shrink (based on value of animal at purchase) | 0.56 | 0.62 | 81 |
| Utilities (based on the value of animal at purchase) | 1.40 | 1.56 | 203 |
| Price risk management (LRP) | 65.00 | 72.22 | 9,389 |
| Interest on cattle ownership | 55.34 | 61.49 | 7,994 |
| Interest on operating capital | 9.49 | 10.55 | 1,371 |
| Death loss at 1% of beginning value | 20.25 | 22.50 | 2,925 |
| Cost of electric polywire fencing | 44.55 | 49.50 | 6,435 |
| Cost for delivering water to cattle | 5.33 | 5.92 | 770 |
| Total cost of forage and grazing | 438.36 | 487.07 | 63,319 |
| Net return to land, labor, management, overhead | -311.48 | -346.09 | -44,992 |
| Breakeven calculations | \$/head | \$/acre | \$/operation |
| Average value of gain (\$/pounds) | 0.38 | 0.42 | - |
| Average cost of gain (\$/pounds) | 1.32 | 1.46 | - |
| B.E. ADG (revenue = total cost) (pounds/day) | 3.35 | 3.72 | - |
| B.E. purchase price of stocker (\$/pounds) | 3.83 | 4.26 | - |
| B.E. sale price of stocker (\$/pounds) | 3.15 | 3.50 | - |

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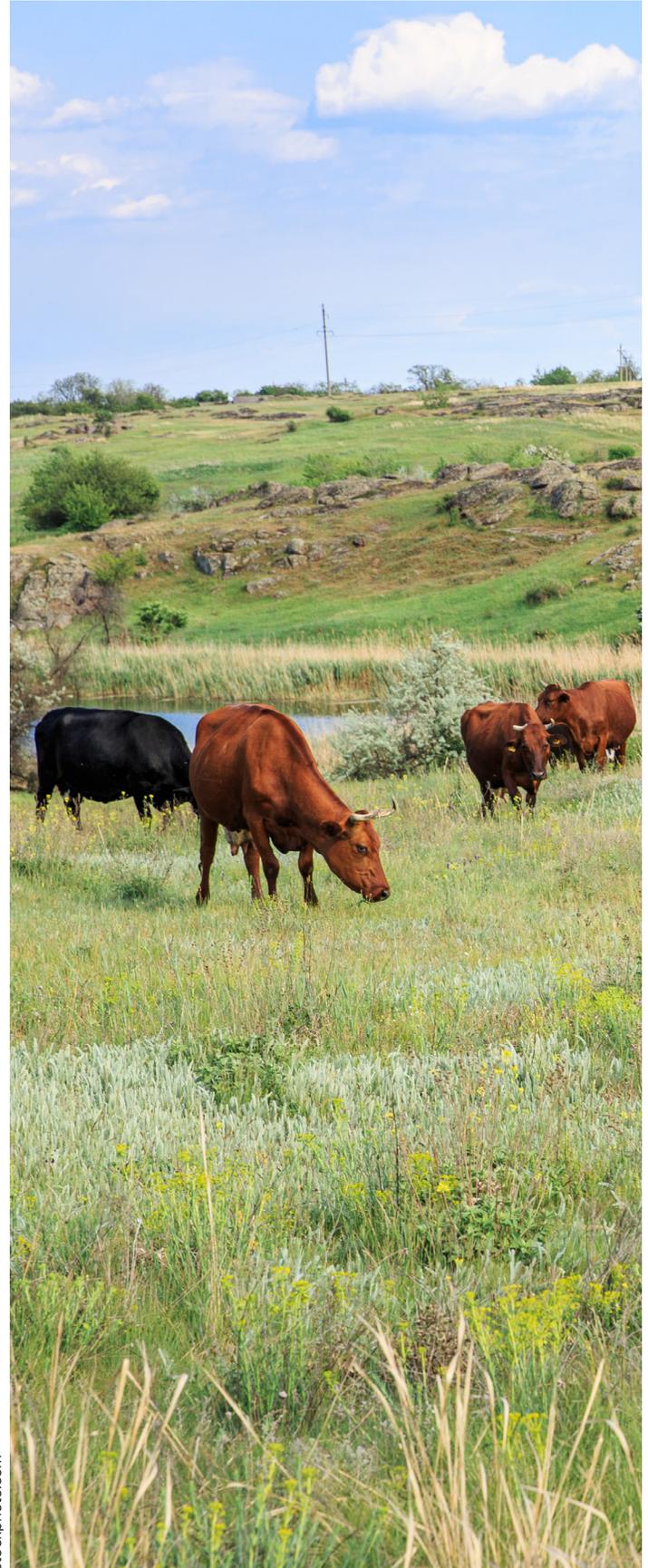
Economic Potential for Grazing Irrigated Annual Forage with Stocker Cattle in Western North Dakota – continued from page 5

Net return was most sensitive to average daily gain (ADG) and purchase and sale prices of stocker cattle. The breakeven ADG, holding all other prices and costs constant, is 3.35 pounds/head/day. For the cereal forage used in this study, an ADG this high would be unlikely to realize. The breakeven purchase price for the 450-pound stocker steers, holding all other prices and costs constant, is \$3.83/pound. Conversely, holding the purchase price constant at \$4.50/pound, the sale price of the 783-pound finished steers would need to be about \$3.15/pound for the grazing system to realize a breakeven net return of \$0/acre. For comparison, NDSU enterprise budgets for irrigated corn project a negative net return of about -\$68.03/acre for the 2025 growing season but project a positive gross margin that covers all direct variable costs equal to \$123.02/acre.

The economic results reported in this study reflect what we expect from cattle markets during the proposed 2025 grazing season. They do not reflect what the results might be in periods when cattle prices reflect a cattle cycle that represents a sizeable herd expansion. When the national supply of cattle expands enough to have surpluses again, the ability for producers to find and purchase cattle at discounts will likely improve, resulting in more attractive values of gain and the net margins of alternative stocker cattle grazing systems.

The results do suggest that agronomic research targeting the development of higher-quality annual forage mixes produced under irrigation for stocker cattle grazing is warranted. Also, additional benefit-cost analyses that examine the economic potential for grazing alternative annual forages established on cropland with rainfed growing conditions are also warranted.

Please feel free to contact me with any questions at jon.biermacher@ndsu.edu.



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Are Net Farm Incomes Expected to Rise in 2025?

Bryon Parman, Agricultural Finance Specialist

On Feb. 6, the USDA published its forecast for Net Farm Income (NFI) and Net Cash Farm Income (NCFI) for 2025. The USDA is projecting NFI to increase by 26.4% and NCFI to increase by 18.8% when adjusted for inflation. This would put overall farm incomes well above average and considerably higher than in both 2023 and 2024. However, the income increases are not a result of overall prices or quantities for livestock and crop production. When adjusted for inflation, cash receipts for livestock are projected to fall from \$278.2 billion to \$275.4 billion and cash receipts for crops are projected to fall from \$251.1 billion to \$239.6 billion. For all agriculture commodities combined, total inflation-adjusted cash receipts are projected to fall from \$529.3 billion to \$515 billion.

On the expense side of agriculture, production costs are projected to decline overall by \$2.5 billion. Some expenses, such as labor, livestock purchases, seed, taxes, interest and rent, are projected to increase from 2024 to 2025. Other costs, such as fertilizer, pesticides and especially feed, are projected to decrease. According to USDA, the overall net reduction in production costs has put 2025 expenses

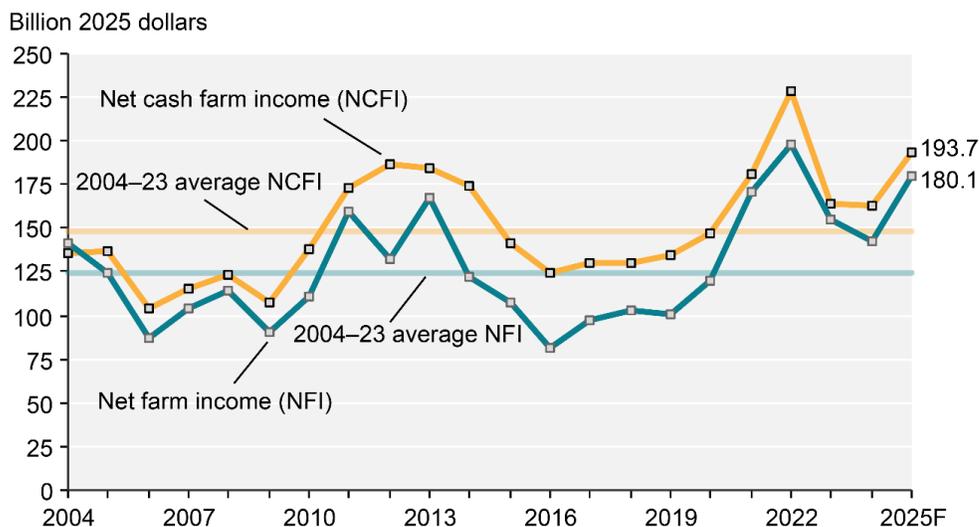
comparable to 2021 levels adjusted for inflation. However, a nearly \$2.5 billion decrease in production expenses for crop and livestock production does not offset the \$14.3 billion dollar decrease in total cash receipts.

Using overall agricultural NFI can somewhat distort the strength of the agricultural economy for producers of crops only or livestock only. If livestock prices are high (and costs are manageable), strong financial returns while crop prices are low and strong livestock prices can make aggregate net incomes appear better than they truly are for producers who specialize in row crop farming. This is certainly the case in 2025 when the agricultural livestock economy remains strong while crop profit margins are slim or nonexistent for many producers.

The big driver of the increase in NFI and NCFI is the projected increase in government program payments. Direct government payments are expected by USDA to be \$42.4 billion in 2025, emanating from the American Relief Act. This is in contrast to 2024 when direct government payments were \$9.3 billion. Overall, this shows a year-over-

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Figure 1: USDA Net Farm Income and Net Cash Farm Income Forecasts



Note: F = forecast; data for 2024 and 2025 are forecasts. Values are adjusted for inflation using the U.S. Department of Commerce, Bureau of Economic Analysis, Gross Domestic Product Price Index (BEA API series code: A191RG) rebased to 2025 by USDA, Economic Research Service.

Source: USDA, Economic Research Service, Farm Income and Wealth Statistics. Data as of February 6, 2025.

Are Net Farm Incomes Expected to Rise in 2025?

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year increase of \$33.1 billion. While there are projected to be some typical or “non ad hoc” government payments — such as conservation payments, Price-loss Coverage payments (PLC), Agricultural Risk Coverage payments (ARC) and some Dairy Margin Coverage (DMC) payments — those only account for approximately \$6.8 billion or 16% of the \$42.4 billion in total payments. The remaining \$35.7 billion is expected to come from supplemental and ad hoc disaster assistance. If the projections hold, 2025 will have the second-highest direct government payment total behind only 2020, which mainly consisted of USDA and non-USDA pandemic assistance payments. Data on direct government payments may be found online at <https://data.ers.usda.gov/reports.aspx?ID=4050>.

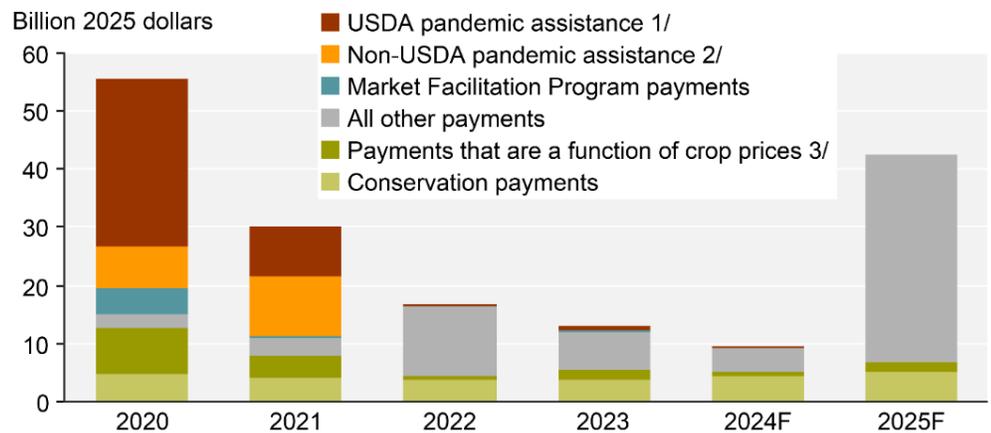
In comparison, ad hoc and disaster assistance payments totaled \$4.4 billion in 2024 and \$6.6 billion in 2023, as opposed to \$35.7 billion expected in 2025. Thus, in the absence of payments created within the American Relief Act, direct government payments would probably be somewhere around \$12.4 billion, which is within range of what they had been the previous few years. This would put NFI down to approximately \$150 billion from an inflation-adjusted \$180.1 billion and NCFI down from a projected \$193.7 billion to \$163.7 billion. Under this scenario, NCFI in 2025 would be close to that of 2024, and the very modest growth in NFI would come mainly from nonmoney-imputed incomes and livestock production cost decreases.

On March 4, the U.S. government announced sweeping tariffs on imported goods from China, Canada and Mexico. Tariffs of 25% were to be placed on goods from Canada and Mexico and an additional 10% tariff on China atop a 10% tariff on China in February. Then, a few days later, the tariffs on Mexico and Canada were suspended; the tariff on China

remained in effect. The tariffs on Mexico and Canada are now expected to go into effect on April 2, when reciprocal tariffs are being placed on many other countries to match the tariffs already in place on U.S. goods.

The impacts of these tariffs on agriculture are difficult to predict. It depends on which imports or exports the tariffs are applied as well as market reactions. It also depends on how long the tariffs remain in effect. In a worst-case scenario, the ad hoc payments from the American Relief Act alone may not be enough to offset U.S. agricultural commodity price declines. If the tariffs are relatively short-lived, or not implemented at all, perhaps the overall impact will be minimal, and the current forecast of an increase in NFI and NCFI is accurate.

Figure 2: USDA Direct Government Payments by Category to U.S. Farm Producers, 2020-25F



Note: F = forecast. Values are adjusted for inflation using the U.S. Department of Commerce, Bureau of Economic Analysis, Gross Domestic Product Price Index (BEA API series code: A191RG) rebased to 2025 by USDA, Economic Research Service.

1/ Includes payments from the Coronavirus Food Assistance Program and other USDA pandemic assistance for producers.

2/ Includes forgiven loans from the Paycheck Protection Program.

3/ Includes Price Loss Coverage, Agriculture Risk Coverage, loan deficiency payments (excluding grazeout payments), marketing loan gains, and dairy payments.

Source: USDA, Economic Research Service, Farm Income and Wealth Statistics. Data as of February 6, 2025.

U.S. Beef Cow Herd Declines While North Dakota's Increases

Tim Petry, Extension Livestock Marketing Specialist

The USDA-National Agricultural Statistics Service (NASS) released the much-anticipated annual Cattle Inventory report on Jan. 31, 2025. It is available at <https://usda.library.cornell.edu/concern/publications/h702q636h>.

Given the continuing drought in important cattle-producing regions and the historically low number of beef replacement heifers on hand to start the year, the big question wasn't if but how much the beef cow herd declined.

The report was especially important because NASS did not release the usual July Cattle Inventory report in 2024 due to budgetary constraints.

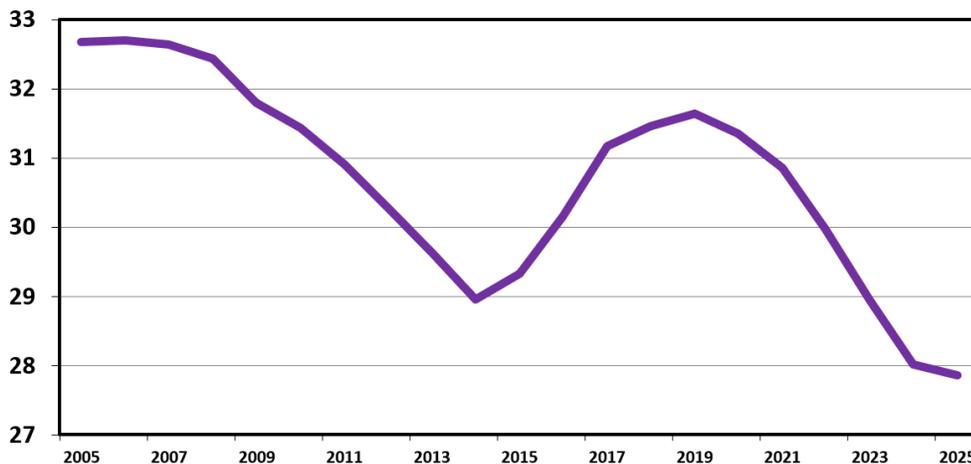
U.S. beef cow numbers on Jan. 1, 2025, at 27.86 million head were down 149,500 head, or 0.5% from the 28.01 million head on Jan. 1, 2024. The 2023, 2024 and 2025 numbers were all below the 28.96 million beef cows at the last cyclical low in 2014, which saw the previous record high cattle prices.

Some cattle market observers expected the beef cow herd to be down about 1%. In the 2025 report, NASS revised the Jan. 1, 2024, beef cow numbers down from the earlier estimate of 28.22 million head so that would be closer to a 1% decline.

2024 marked the sixth straight year of U.S. beef cow herd cyclical liquidation. Numbers peaked on Jan. 1, 2019, at 31.64 million head, so the six-year decline was by about 3.78 million (a 12% decline).

January 1 Beef Cow Inventory - U.S., Annual

Mil. Head



Source: USDA NASS

Drought conditions in important beef cow-producing regions began in 2020 and expanded and intensified in 2021 with over 50% of the beef cow herd in areas with at least some drought. That contributed to continued beef cow liquidation.

The Northern Plains, including North Dakota, were hit especially hard with drought in 2021.

Cattle prices started increasing cyclically in 2021 and continued in 2022 due to the lower cattle numbers and good domestic and export beef demand.

But drought worsened still in 2022 with 76% of the cow herd in drought by late summer, contributing to very high beef cow slaughter.

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U.S. Beef Cow Herd Declines While North Dakota's Increases – continued from page 9

Drought conditions in 2023 improved in some important cattle-producing regions, including North Dakota, with only 35% of beef cows in drought by the year's end. Cattle prices reached record-high levels.

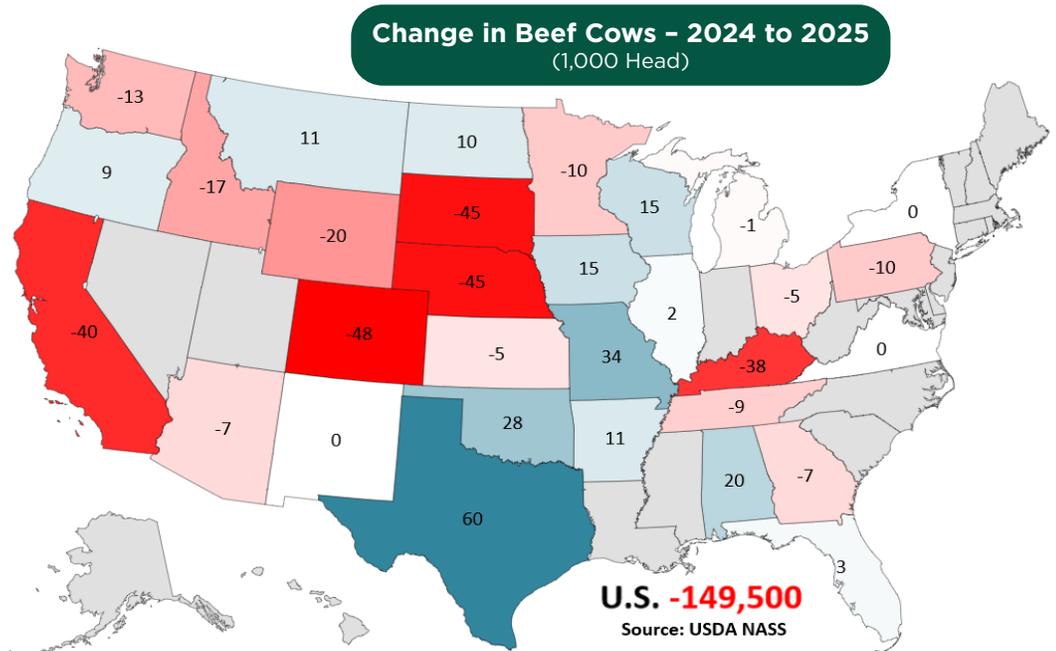
Drought conditions continued to improve. By June 2024, only 8% of cows were in drought. However, drought conditions again intensified, and by late fall, 60% of cows were back in drought. Moisture conditions have improved in the last few months, especially in the Southern Plains, with about 38% of beef cows remaining in drought areas.

The top 10 beef cow states are the following, in order of importance: Texas, Oklahoma, Missouri, Nebraska, South Dakota, Montana, Kansas, North Dakota, Kentucky and Florida. These states account for 57% of the U.S. beef cow herd.

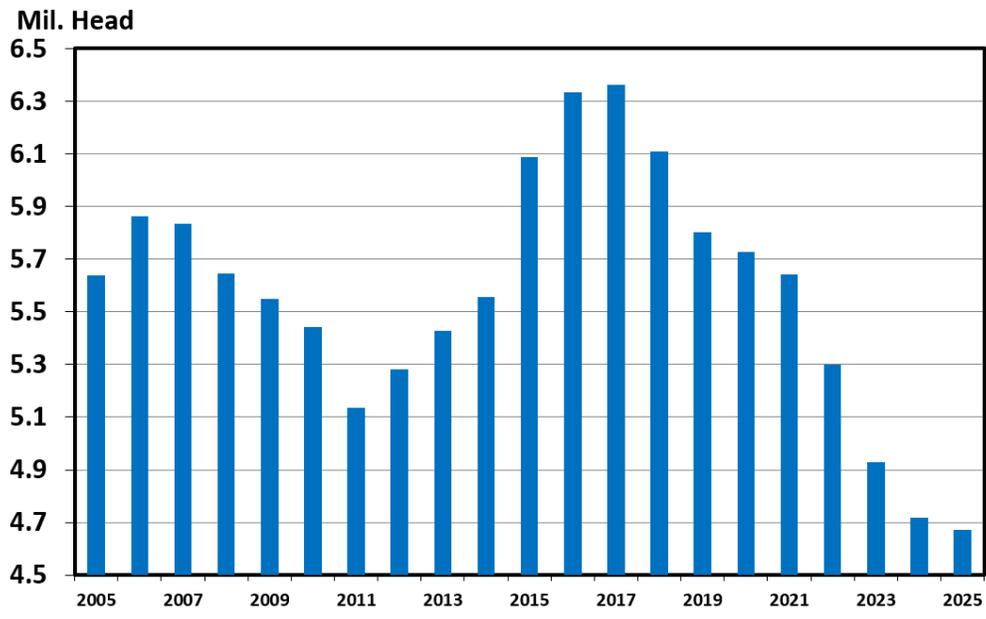
Of those states, Texas, Missouri, Oklahoma, Montana, North Dakota and Florida saw increases in beef cow numbers during 2024, indicating interest in beef herd restocking.

The 2024 U.S. beef replacement heifer inventory at 4.67 million head declined 45,900 head (1%). That was the lowest number for many years. The number of bred beef heifers expected to calve in 2025 was 2.92 million, down 1.7% from 2024.

Continued on page 11.



Heifers Held as Beef Cow Replacements – January 1, U.S.



U.S. Beef Cow Herd Declines While North Dakota's Increases — continued from page 10

The historically low number of replacement heifers will limit beef cow herd rebuilding this year. Of course, weather remains the wild card to when restocking in earnest can occur.

Despite the beef cow herd declining, 2024 beef production was the same as 2023 due to a fed steer and heifer carcass weights increase, more heifers on feed due to drought conditions in major cow-calf regions and the use of beef genetics in the dairy sector.

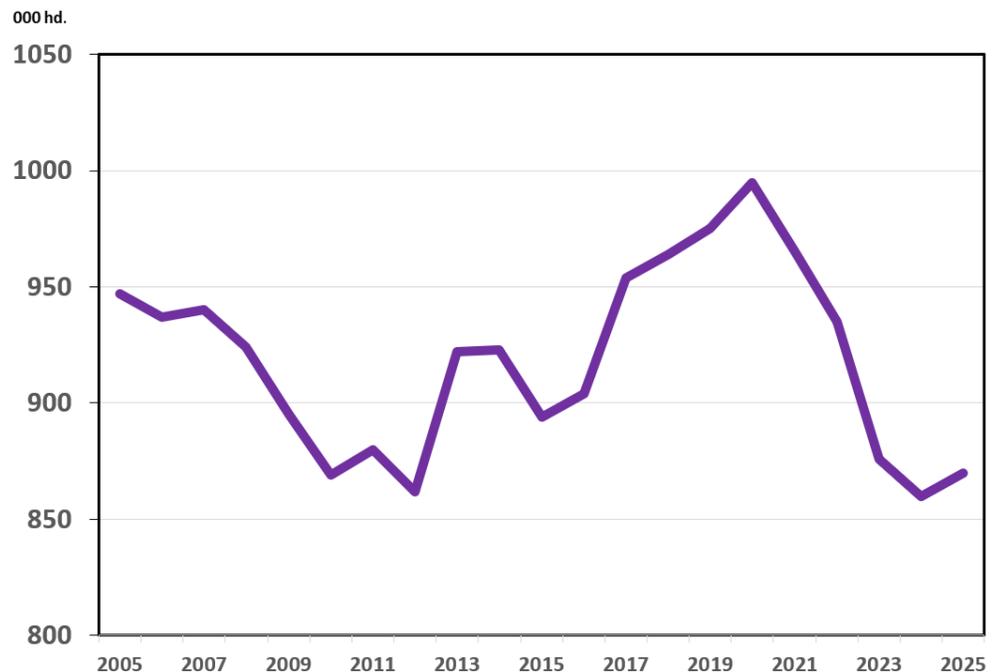
Steer and heifer carcass weights averaged 20-25 pounds heavier — the equivalent of slaughtering a million more fed cattle — than in 2023. That offset the 926,300-head decline in 2023 U.S. beef cow numbers, an important factor to consider when cyclical beef cow herd expansion occurs. Since 1975, each cyclical high has been lower than the previous cycle, and that is expected again.

North Dakota beef cow numbers bucked the U.S. trend with only four years liquidation from 995,000 head on Jan. 1, 2020, to 860,000 head on Jan. 1, 2024, due to severe drought conditions. Beef cow numbers increased 10,000 head during 2024 to 870,000 on Jan. 1, 2025, with improved moisture conditions and 6,000 additional beef replacement heifers retained in 2023.

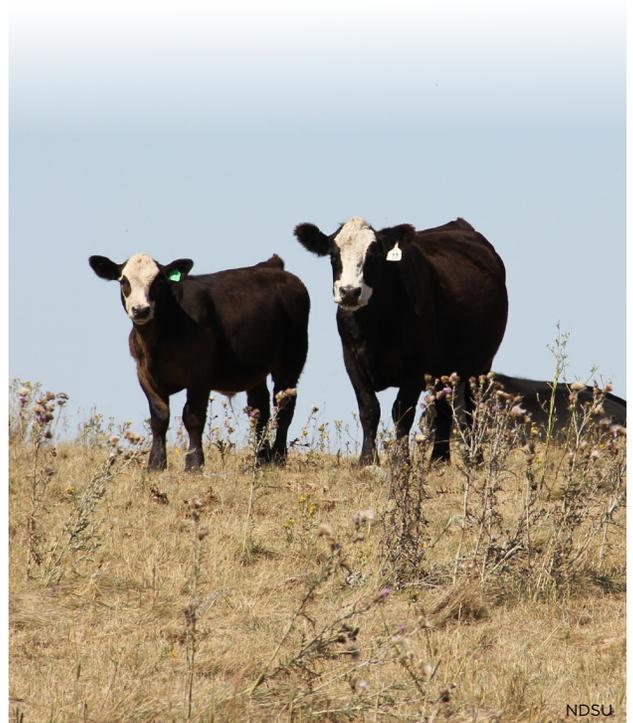
The declining U.S. beef cow herd will mean fewer cattle marketed and likely declining beef production in 2025. That will be supportive to cattle prices.

Current cattle prices are at record-high levels and are expected to continue to increase cyclically. However, price volatility and risk will likely continue. Drought conditions linger, the potential size of the 2025 corn crop is unknown, domestic and export beef demand face challenges and geopolitical and trade issues remain uncertain.

January 1 Beef Cow Inventory - N.D. Annual



Source: USDA NASS



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