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Business Strategies for Row Crop Operations

Dr. Mario Ortez and AFF Fellows

December 5th, 2025

SOUTHERN EXTENSION RISK MANAGEMENT EDUCATION

USDA National Institute of Food and Agriculture
U.S. DEPARTMENT OF AGRICULTURE

Virginia Cooperative Extension
Virginia Tech • Virginia State University

Agenda

9-9.30 am	▪ Virginia Agriculture and Grains Economic Outlook **Dr. Mario A. Ortez**, Assistant Professor and Pearson Fellow, Virginia Tech
9.30-10 am	▪ Lending Update **William Thomas,** Colonial Farm Credit
10-10.30 am	▪ Consumer Trends in Soy-based Products **Eric Chou**, Business Development Manager, Hodo Foods
10.30-11.30 am	▪ Financial Tools for Decision Making **Miru Yim & Colby Crutchfield**, Kohl Centre Agri-food Finance (AFF) Fellows, VT

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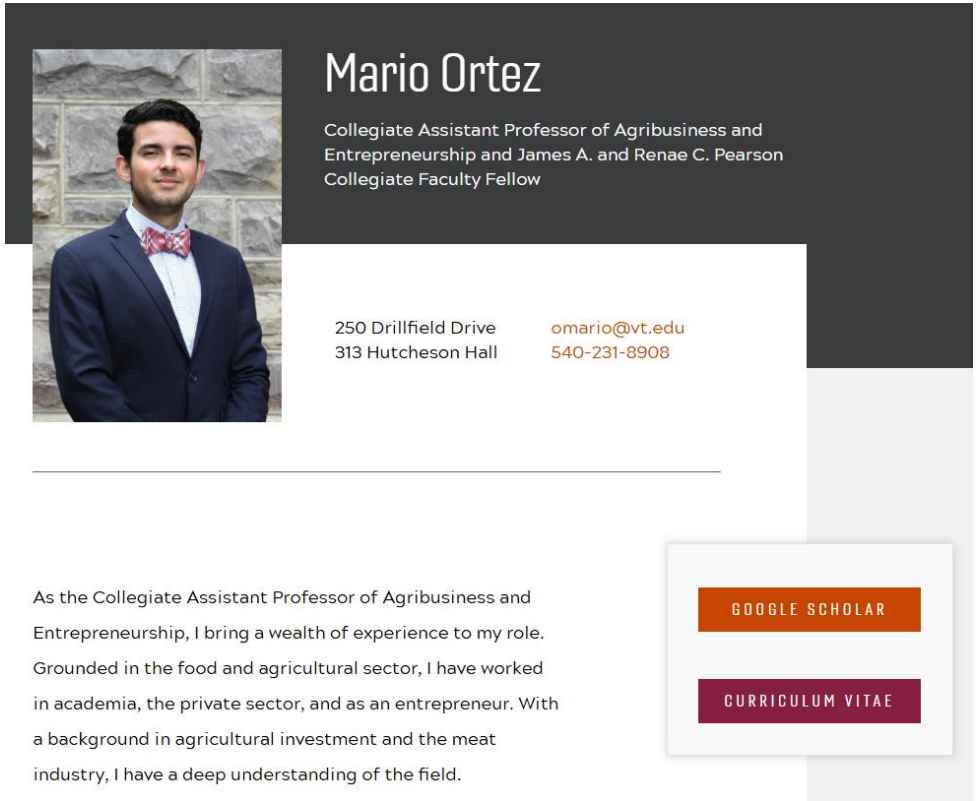
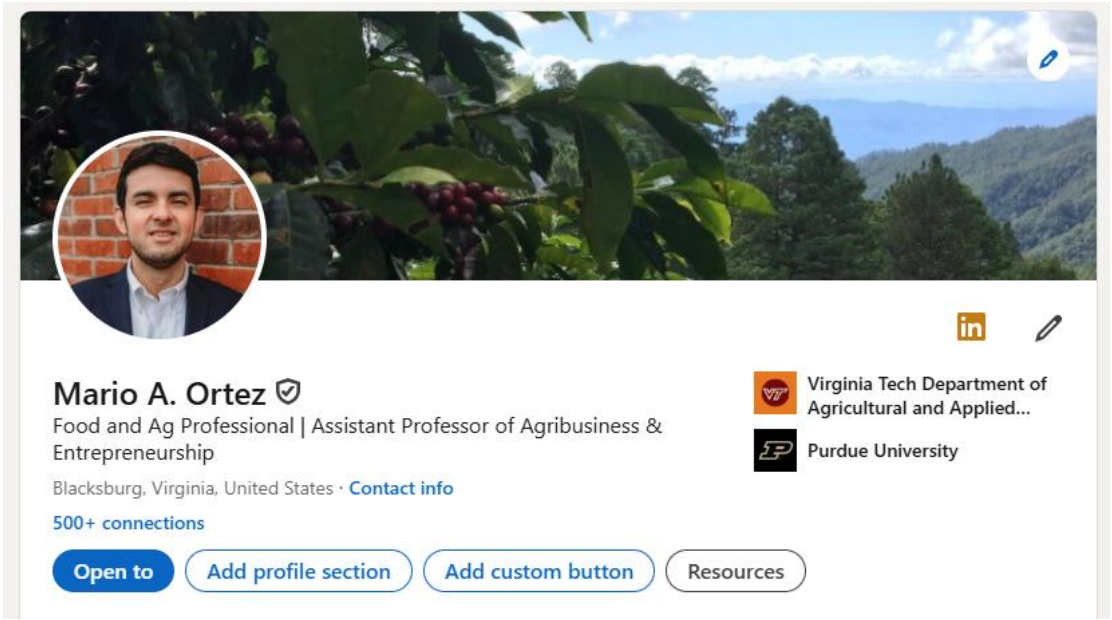
Who is this guy?





Dr. Mario A. Ortez, Assistant Professor and Pearson Fellow, Virginia Tech

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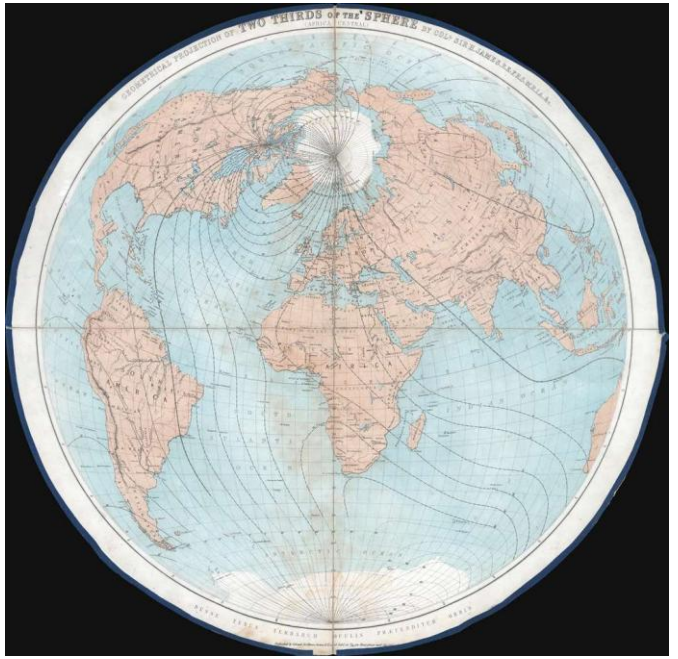
Why are we here?

From your farm to the world…

… and back

So we are here to ponder the interplay between the big picture and the small picture…



… and hopefully a few tricks to try to do what we do in a more profitable way

Demand: The Case for Animal Protein

Two main drivers of long-run demand growth:

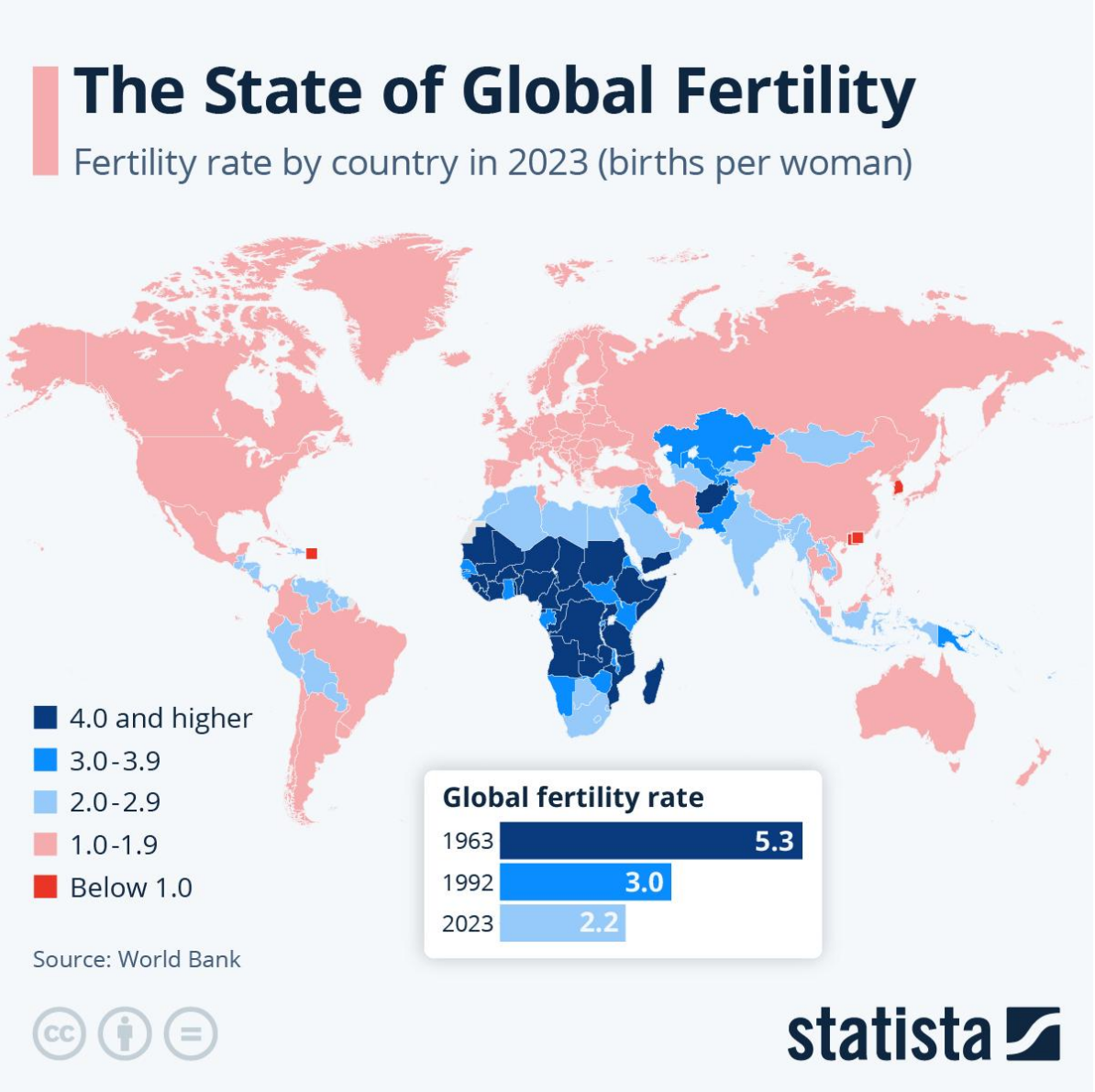
1. **Rising incomes** → households shift diets toward higher-value foods (meat, milk, eggs).
2. **Population growth** → especially in developing regions.

Global balancing act:

1. Slower population growth but higher incomes in developed economies.
2. Rapid population growth + rising middle class in Asia, Africa, and Latin America.
3. Together, these trends **(can)** sustain strong global demand for dairy and meat products.

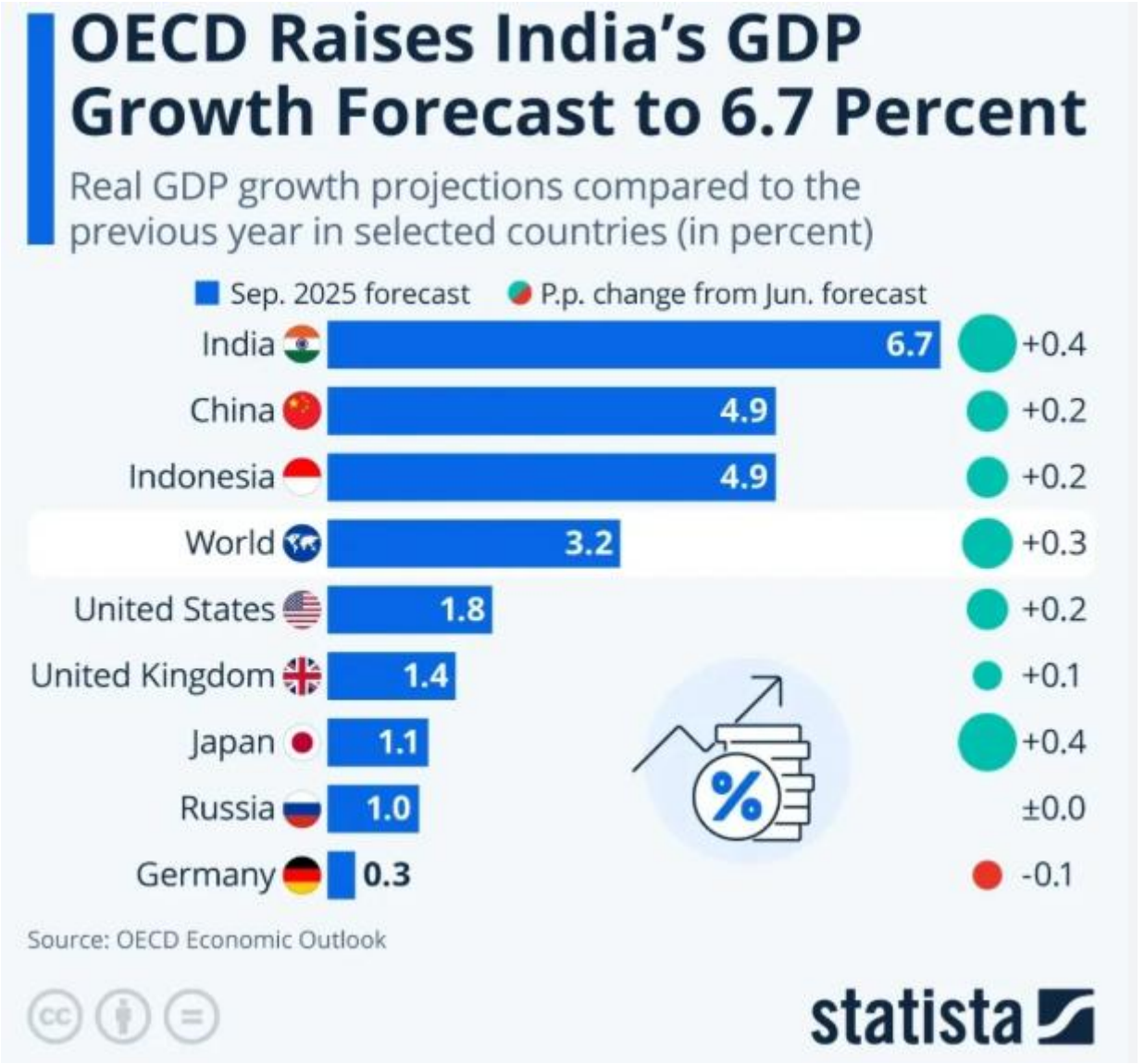
Demand: Global Agbiz Context

The Case for Animal Protein



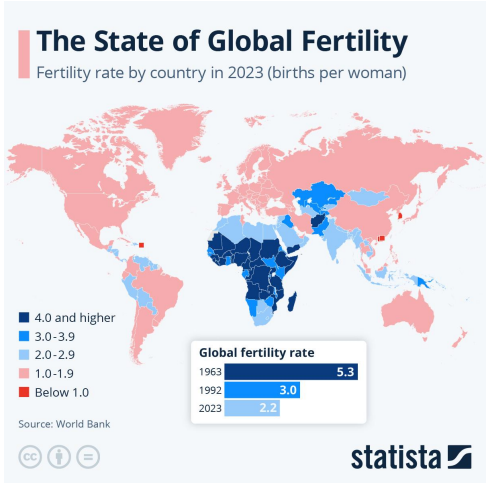
Demand: Global Agbiz Context

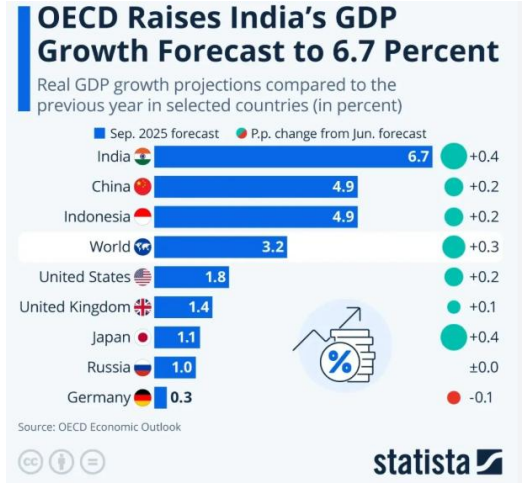
The Case for Animal Protein



Demand: Global Agbiz Context

The Case for Animal Protein





Even if local prices fluctuate, long-term demand for animal protein remains strong — a key reason global agribusiness keeps investing in efficiency and scale

The World's Soy: is it used for Food, Fuel, or Animal Feed?

Shown is the allocation of global soy production to its end uses by weight. This is based on data from 2017 to 2019.

Our World in Data

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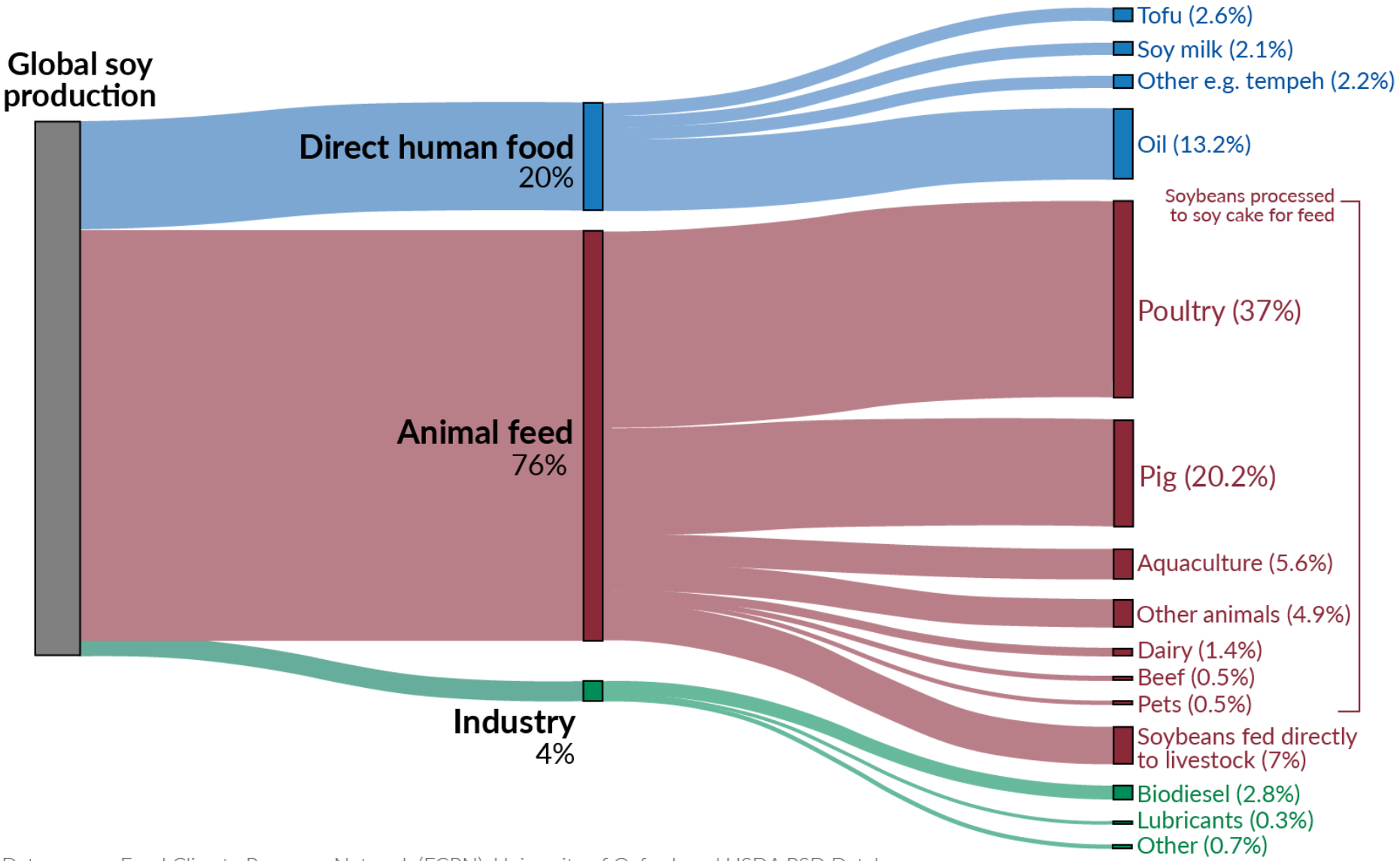
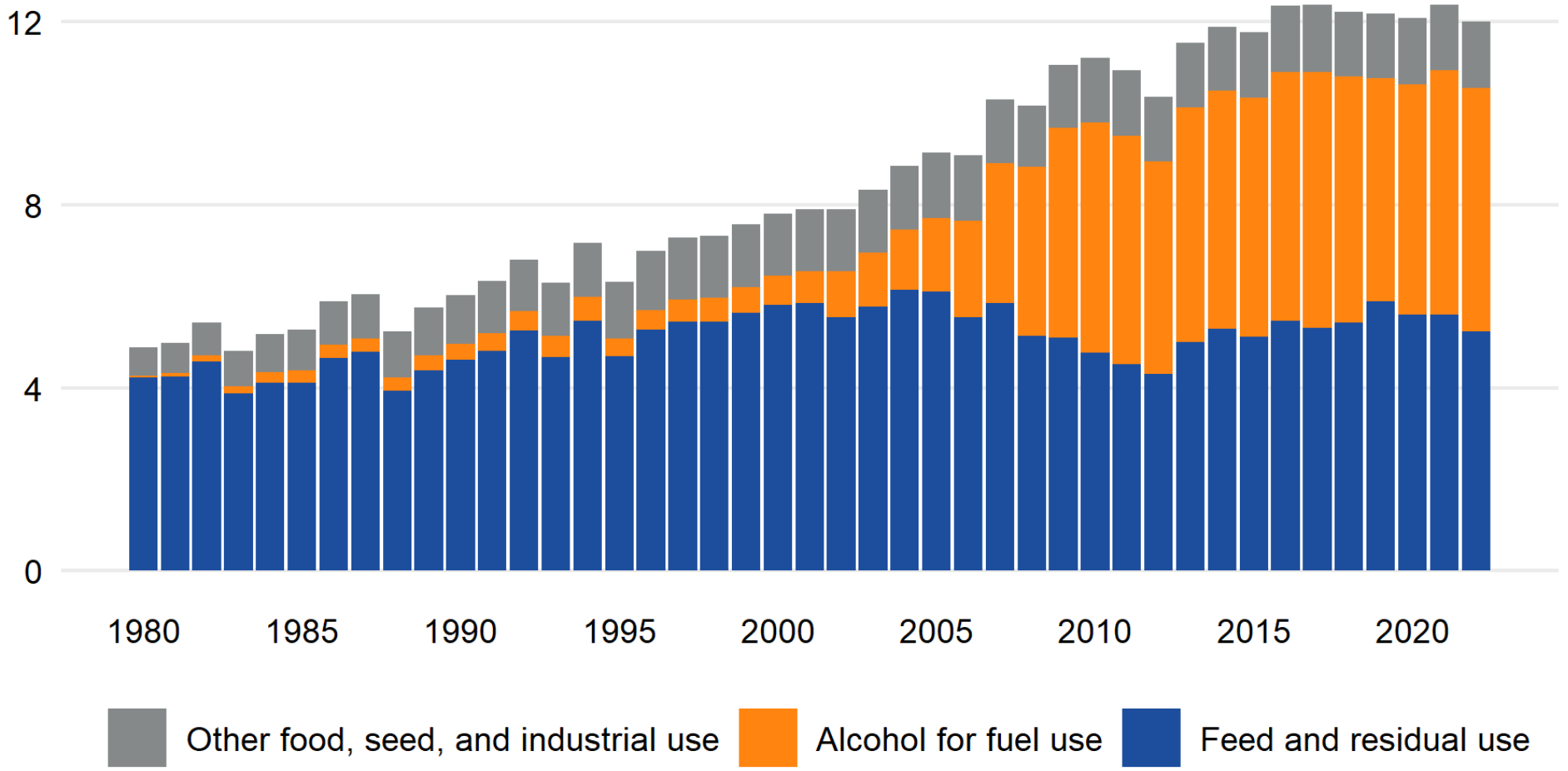


Data source: Food Climate Resource Network (FCRN), University of Oxford; and USDA PSD Database.

U.S. domestic corn use

Billion bushels



Updated: September 2022.
Source: USDA, National Agricultural Statistics Service.

How about the prospect of population decline?

The Atlantic

America's Impending Population Collapse

This year, for the first time in nearly a century, more foreign-born people will likely leave the United States than will enter.

1 month ago

NPR

People are having fewer kids. Their choice is transforming the world's economy

Family size around the world is dropping. That choice by couples is triggering a population shift that's sending shock waves through...

1 month ago

Reuters

Ukraine stares down the barrel of population collapse

As the country spirals into a demographic disaster, Ukrainian authorities face a quandary: who will be left to pick up the pieces once the...

1 day ago

Newsweek

Japan Says Population Crisis Is 'Biggest Problem'

Prime Minister Sanae Takaichi of Japan has called population decline the country's "biggest problem" and set out an action plan for her...

2 weeks ago

The New York Times

https://www.nytimes.com › 2024/08/24 › population-de...

Opinion | Should We Be Worried About Population Decline?

Aug 24, 2024 — Dr. Kumar argues that **population decline would be a bad thing for society**, largely on the grounds that as a population's average age rises, fewer young people ...

How about the prospect of population decline?

The Background

In the late 1700's Thomas Malthus famously worried that food production would not keep up with population growth. Here in his own words:

"The power of population is indefinitely greater than the power in the earth to produce subsistence for man" (Malthus, 2010).

How about the prospect of population decline?

The Background

Thereafter, Fr. Gregor Mendel, O.S.A. laid the foundation of modern genetics,
Louis Pasteur pioneered Pasteurization,
Nitrogen fixation from the atmosphere was perfected in Norway,
Norman Borlaug fathered the “Green Revolution” among many other developments that revolutionized the ways we produce, process and store food.

And the rest of the story is sometimes called “the miracle of modern agriculture”

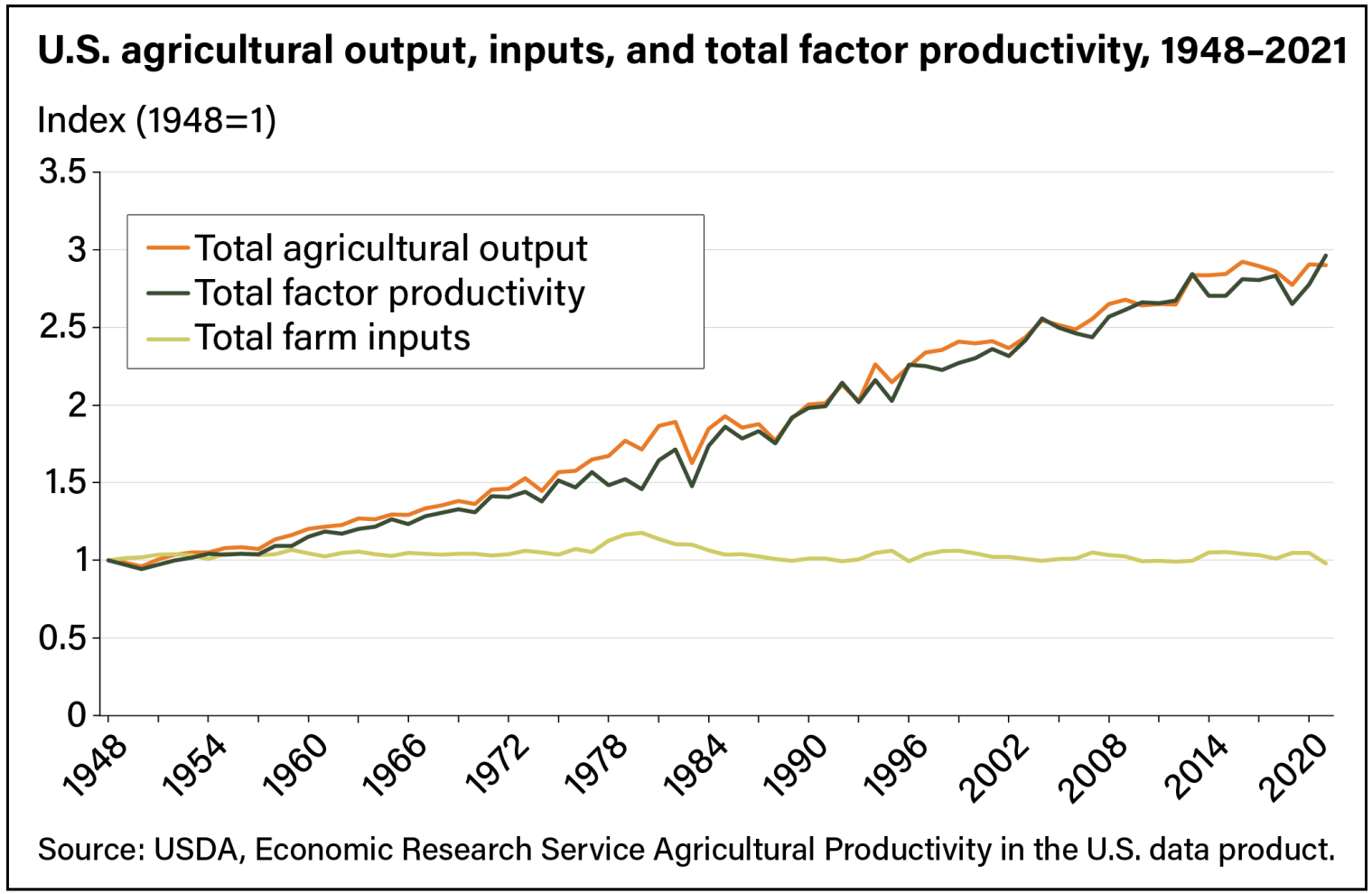
How about the prospect of population decline?

Can the world engine of food production, which has greatly expanded over the past 100 years, still thrive?

This possibility of pervasive population decline towards the later part of this century should be taken into consideration by the Food and Agricultural industries in long-term strategic planning.

The *targeting on increased value added and differentiation*, and *taking into consideration serving a considerably higher share of older consumers* (than that of today), could be two examples of how the industry can prepare.

The Miracle—Ag Sector Productivity



More food. Fewer inputs. Greater efficiency.

How about the prospect of population decline?

Can the world engine of food production, which has greatly expanded over the past 100 years, still thrive?

Read more from yours truly (and others) here:

Food Production and Population Growth: A Cautionary Tale (click here) *by Mario Ortez*

Now let’s talk about our mode immediate present…

2024 Virginia Agriculture (USDA)

Farm facts

Number of farms	Acres of farmland
39,000	7,300,000

Net farm income	Government payments
$868,691,000	$91,933,000

Federal insurance premiums	Federal insurance indemnities
$34,333,000	$104,220,000

Learn more here: (click here)

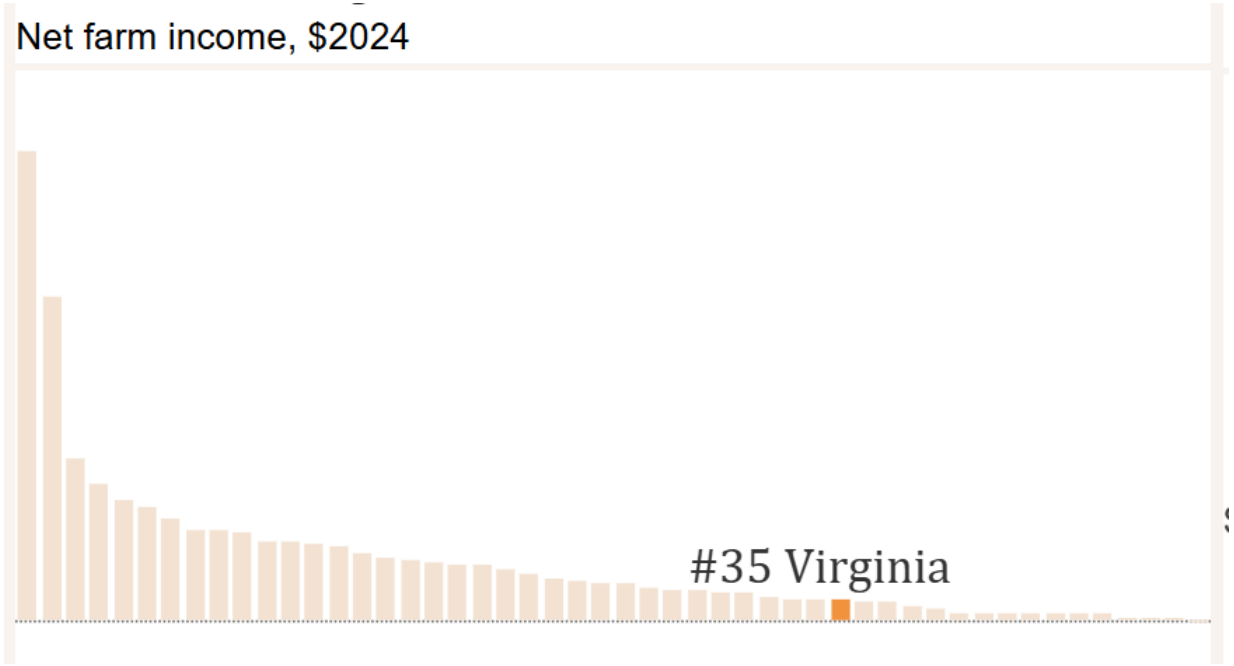
Top 5 cash receipts (2024 dollars)

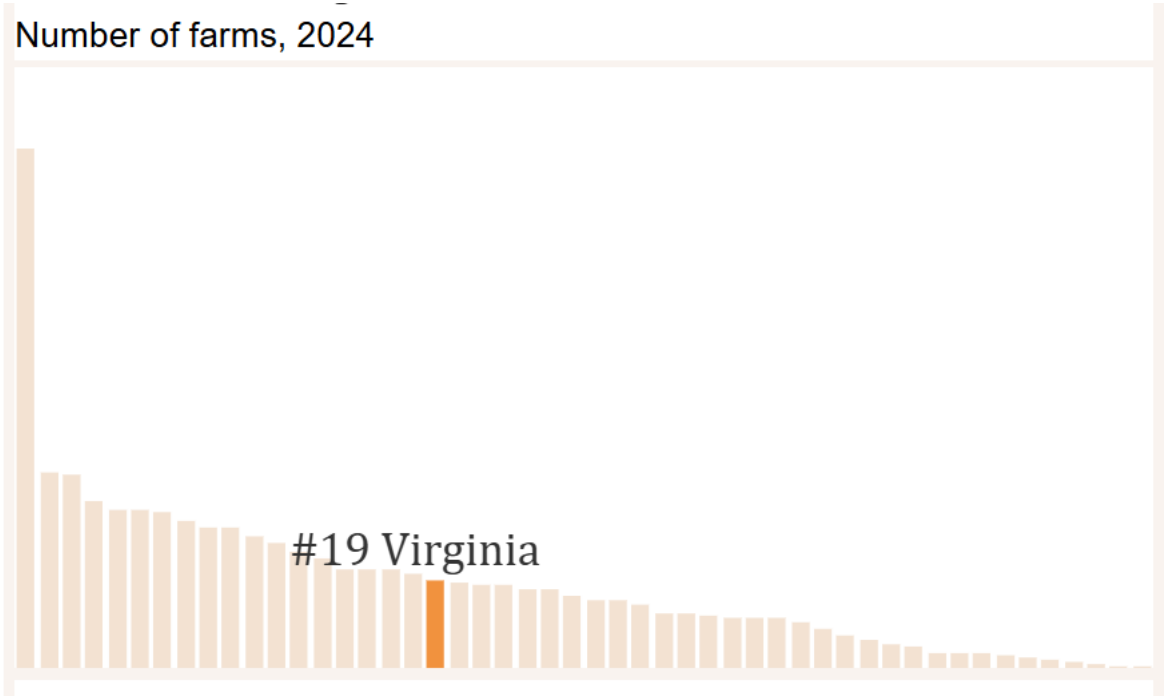
1	Broilers	$1,254,235,000
2	Cattle and calves	$712,985,000
3	Miscellaneous crops	$483,285,000
4	Dairy products, milk	$363,132,000
5	Soybeans	$260,192,000

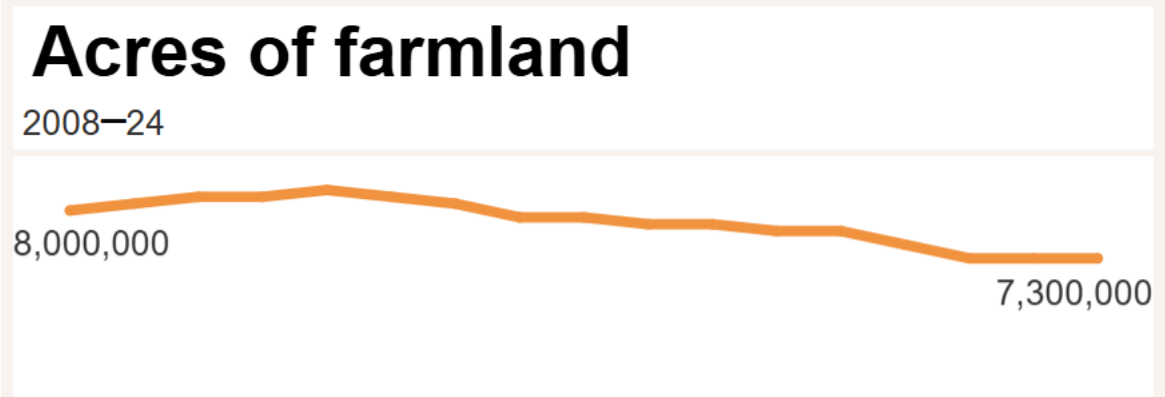
Top 5 production expenses (2024 dollars)

1	Feed	$1,228,811,000
2	Miscellaneous*	$627,150,000
3	Hired labor	$429,269,000
4	Capital consumption*	$314,577,000
5	Livestock purchases	$291,649,000

2024 Virginia Agriculture (USDA)

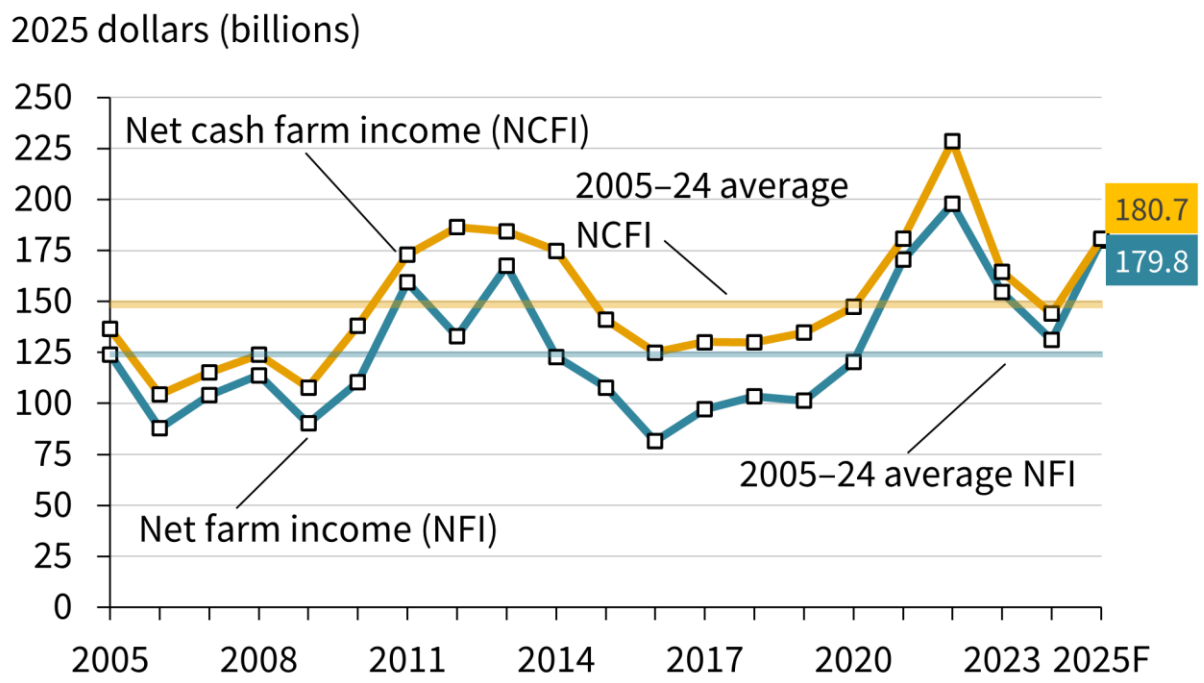






U.S. Farm Sector Income

U.S. net farm income and net cash farm income, inflation adjusted, 2005–25F

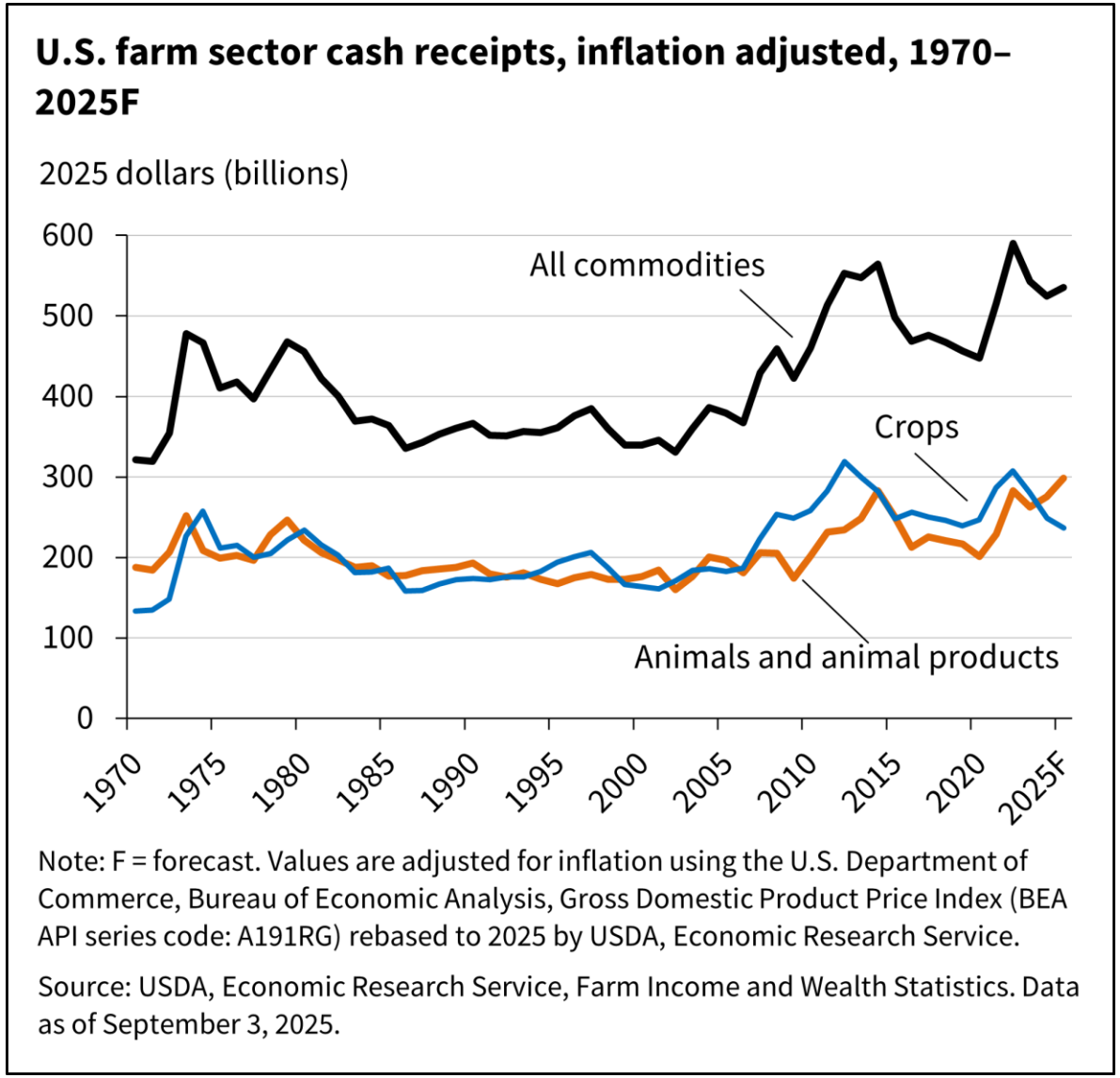


Note: F = forecast. Values are adjusted for inflation using the U.S. Department of Commerce, Bureau of Economic Analysis, Gross Domestic Product Price Index (BEA API series code: A191RG) rebased to 2025 by USDA, Economic Research Service.

Source: USDA, Economic Research Service, Farm Income and Wealth Statistics. Data as of September 3, 2025.

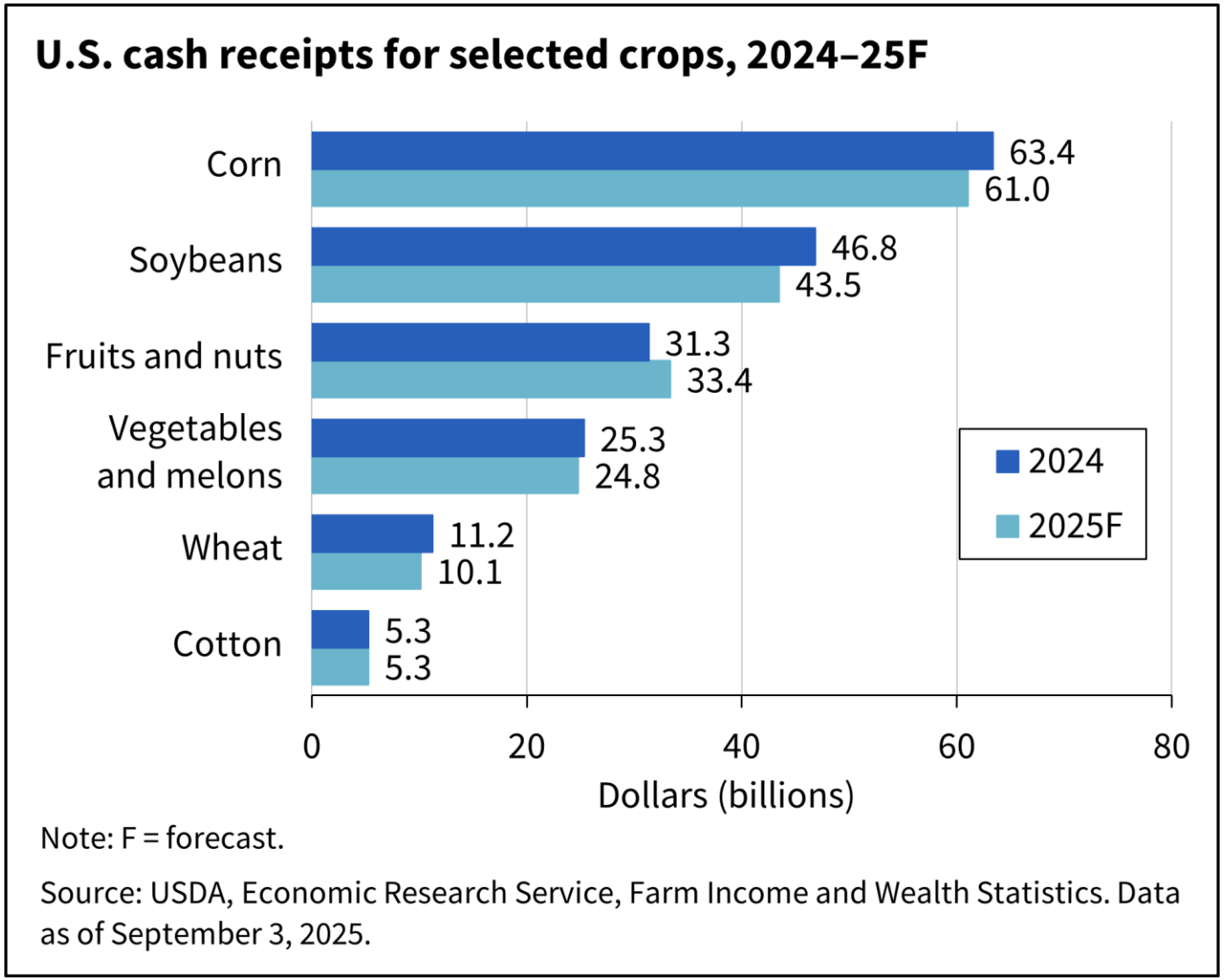
- 2025 (F) at $179.8 billion for 2025, would be $52.0 billion (40.7%) higher than in 2024
- Main driver is Direct Gov. Payments: $30.4-billion increase from 2024
- Fundamental other driver: livestock
- Prod. expenses, are forecasted to increase 2.6% driven by livestock purchased, but lower grain cost.

Total Cash Receipts, 2025 (F)



- 25 (F) is up $10.9 billion (2.1%) from 2024 to $535.2 billion
- Crop 25 (F): decline $12.3 billion (4.9%)
- Animal/animal products 25 (F): grow by $23.2 billion (8.4 percent)

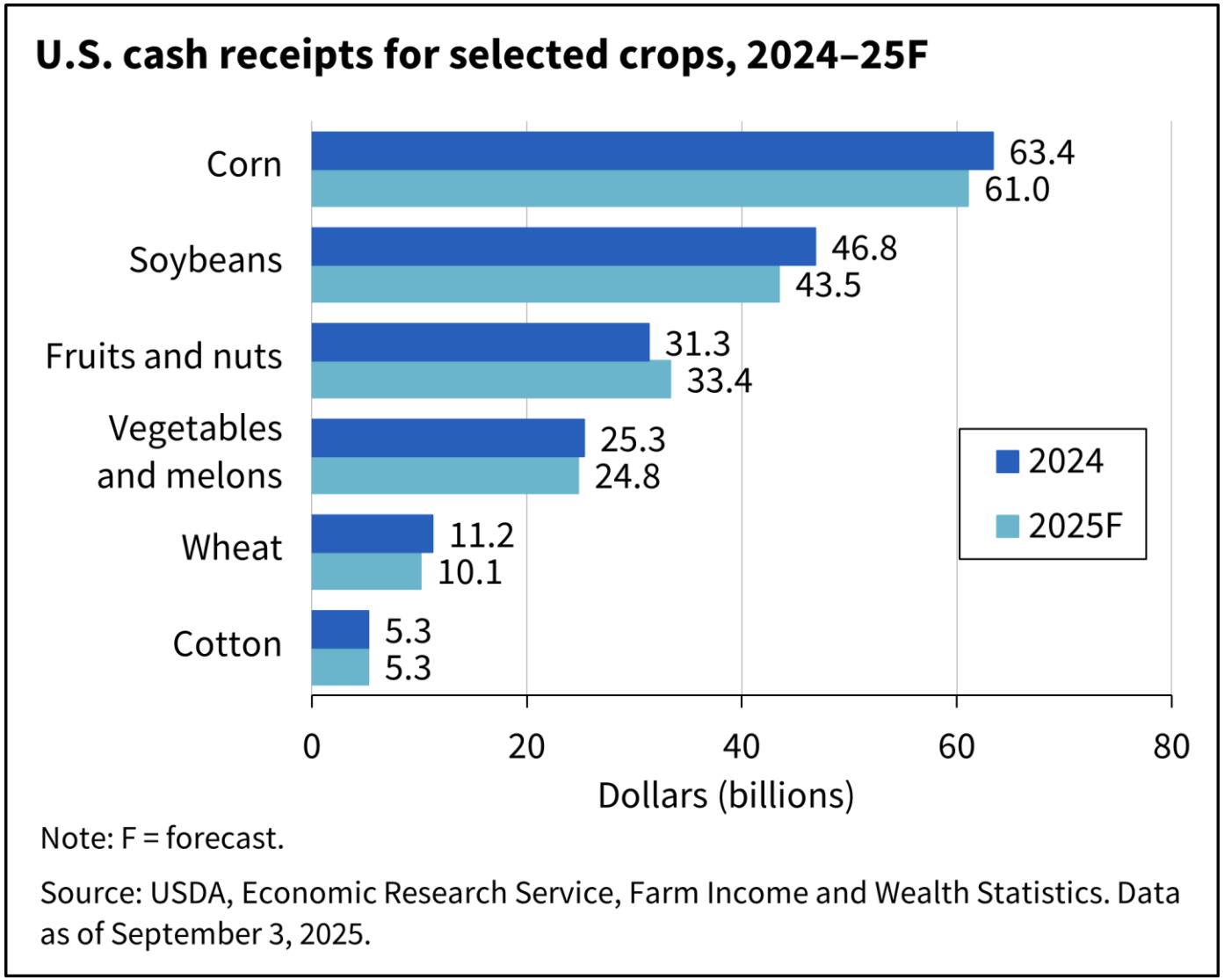
Let's talk crops



- Crop (F) at $236.6 billion in 2025, down by $6.1 billion (2.5%) from '24.

Largely due to price declines across most crops (fruits and nuts were exceptions) relative to 24 which were offset only partially by greater quantities for some commodities.

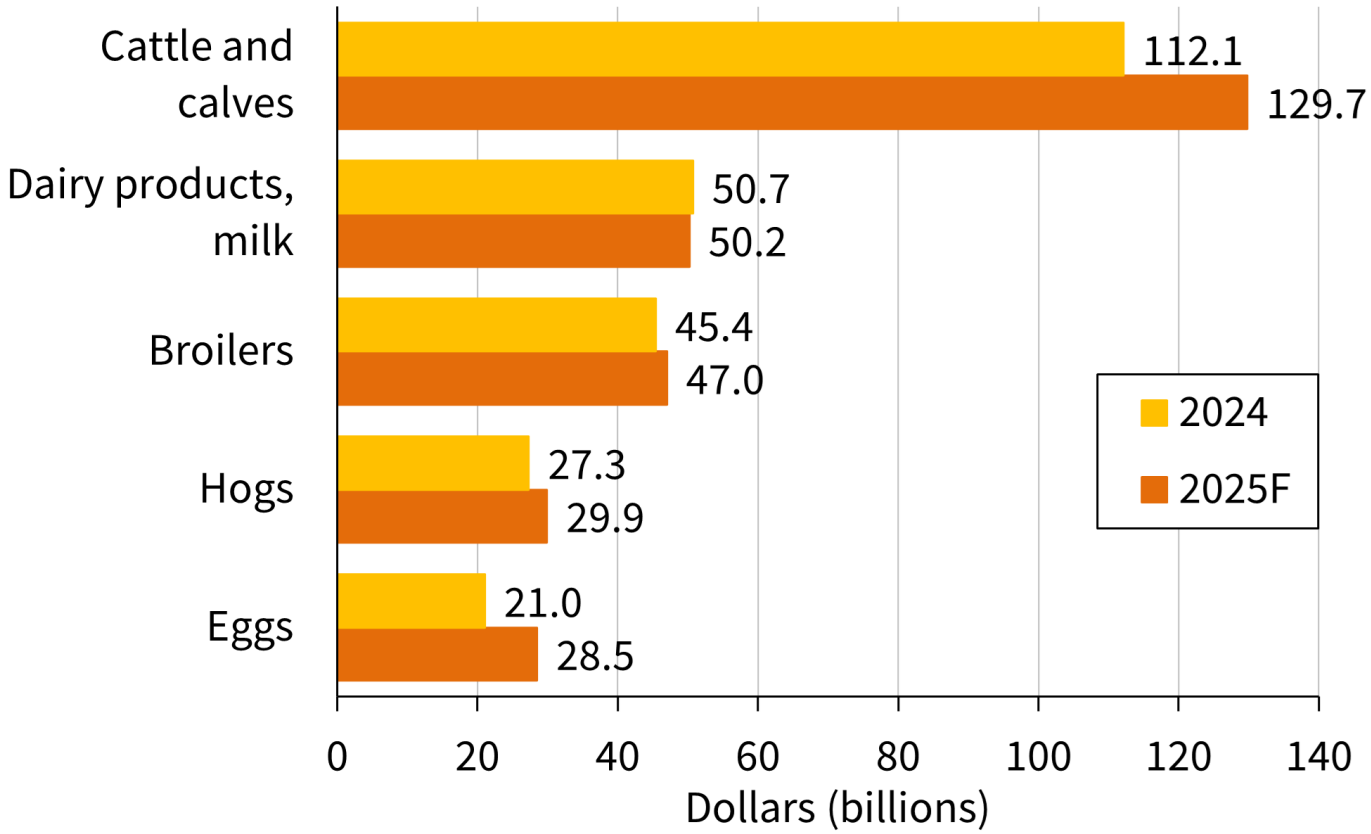
Let's talk crops



- Corn (F) to fall by $2.3 billion (3.7%) primarily due to lower prices.
- Soybean (F) to fall by $3.4 billion (7.2%).
- Wheat (F) to fall $1.1 billion (9.8%), due to lower prices and quantities sold.
- Hay (F) to fall by $0.2 billion (2.5%)

Let's talk livestock

U.S. cash receipts for selected animals/products, 2024–25F



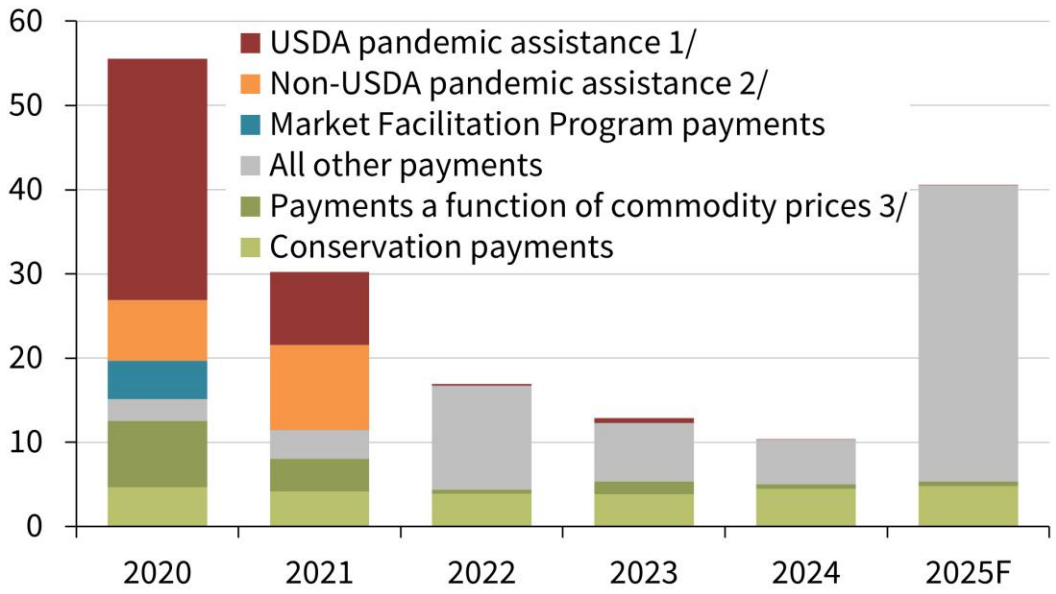
Note: F = forecast.

Source: USDA, Economic Research Service, Farm Income and Wealth Statistics. Data as of September 3, 2025.

- '25 (F) at $298.6 billion in 2025, up by $30.0 billion (11.2%) in nominal terms from 2024.
- Receipts for all major animal/animal products are expected to grow largely due to higher prices with some offsetting effects of lower quantities, most notably for cattle and calves.
- Milk was an exception, with lower cash receipts

Government Payments

Direct Government payments to U.S. farm producers, 2020–25F



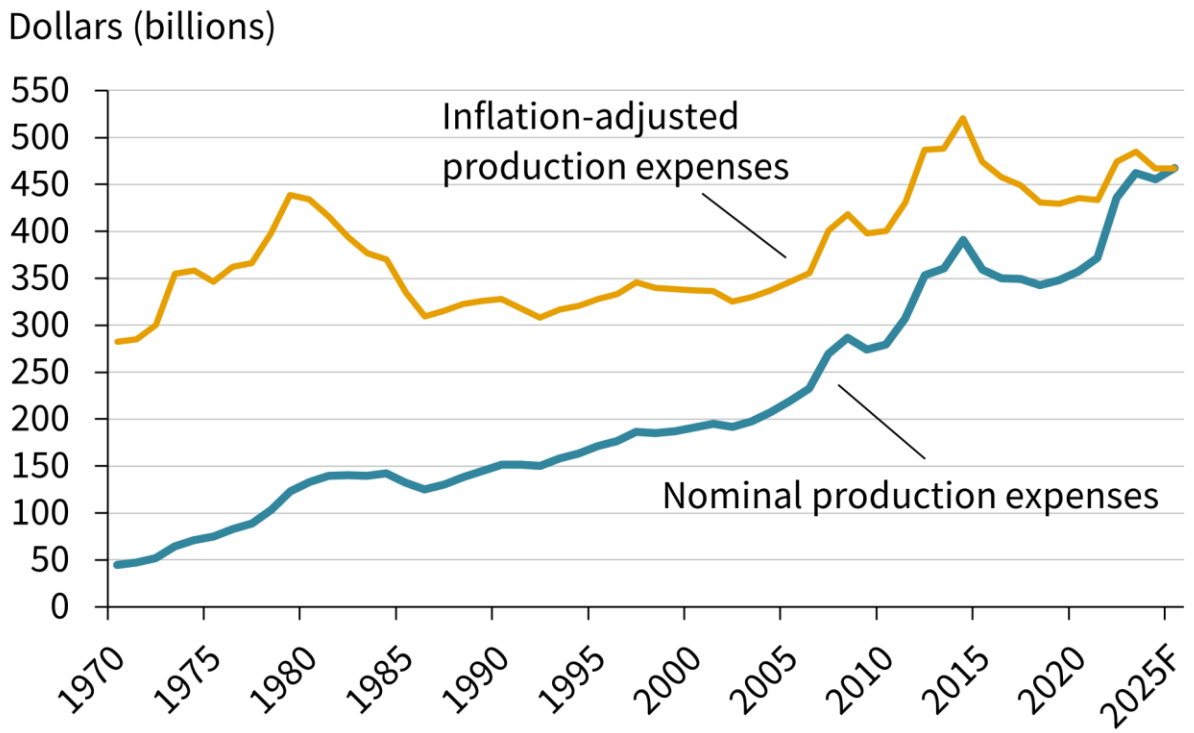
Note: F = forecast. Values are adjusted for inflation using the U.S. Department of Commerce, Bureau of Economic Analysis, Gross Domestic Product Price Index (BEA API series code: A191RG) rebased to 2025 by USDA, Economic Research Service.
1/ Includes payments from the Coronavirus Food Assistance Program and other USDA pandemic assistance programs 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 September 3, 2025.

- 25 (F) at $40.5 billion for 2025, a $30.4 billion increase from the $10.1 billion total for 2024.
- This overall increase reflects higher anticipated payments from supplemental and ad hoc disaster assistance, mainly from the funding authorized in the Disaster Relief Supplemental Appropriations Act, 2025 contained in the American Relief Act, 2025.

Farm Expenses

Nominal and inflation-adjusted U.S. farm production expenses, 1970–25F



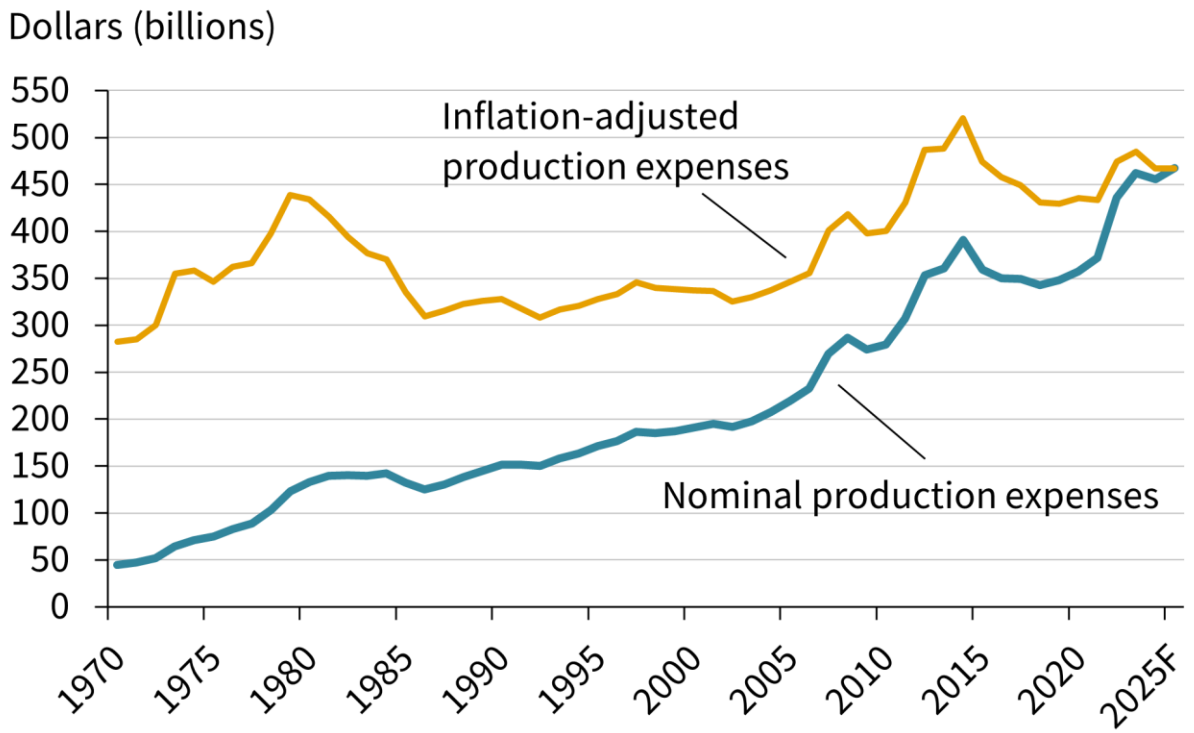
Note: F = forecast. Values are adjusted for inflation using the U.S. Department of Commerce, Bureau of Economic Analysis, Gross Domestic Product Price Index (BEA API series code: A191RG) rebased to 2025 by USDA, Economic Research Service.

Source: USDA, Economic Research Service, Farm Income and Wealth Statistics. Data as of September 3, 2025.

- Farm sector production expenses are forecast at $467.4 billion in 2025, increasing by $12.0 billion (2.6 percent), compared with 2024.
- When adjusted for inflation, the expenses are projected to be comparable to their 2024 levels (increasing slightly by $0.3 billion or 0.1 percent compared with 2024).

Farm Expenses

Nominal and inflation-adjusted U.S. farm production expenses, 1970–25F

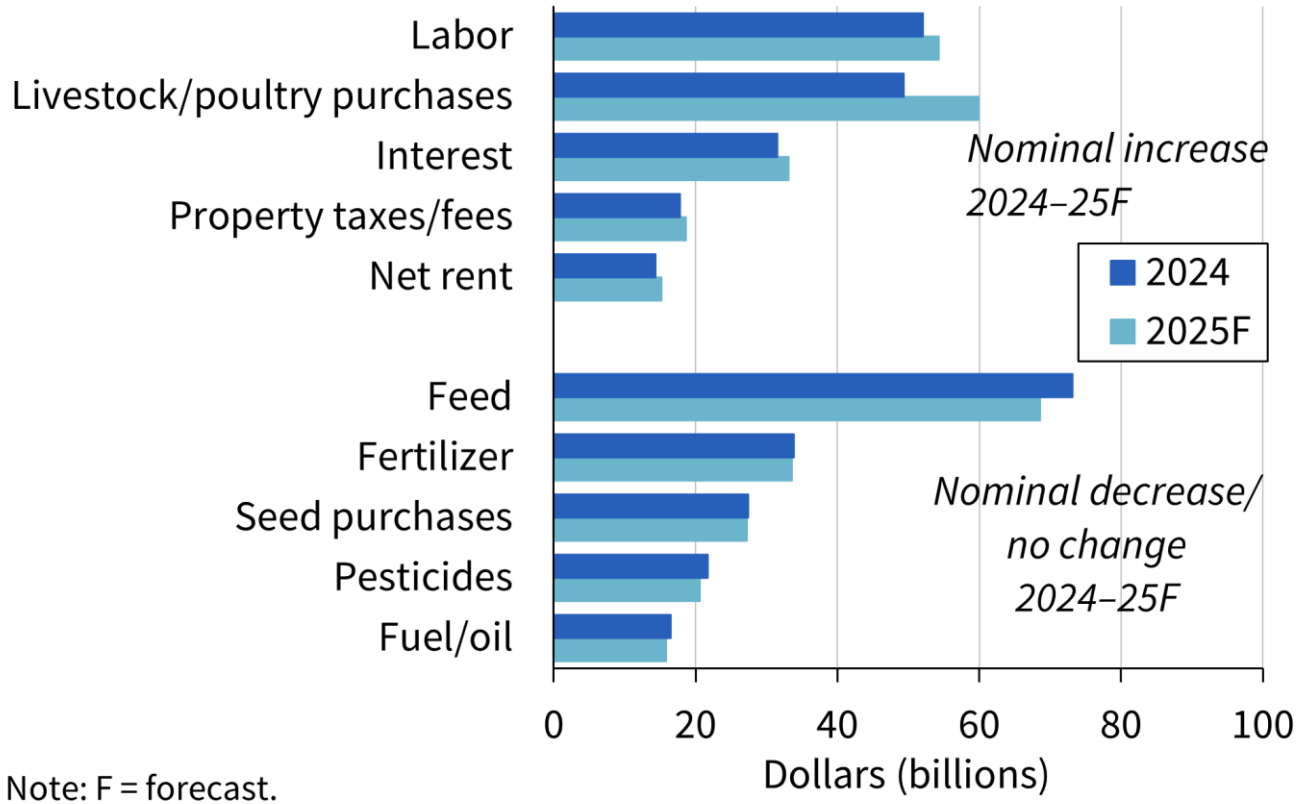


Note: F = forecast. Values are adjusted for inflation using the U.S. Department of Commerce, Bureau of Economic Analysis, Gross Domestic Product Price Index (BEA API series code: A191RG) rebased to 2025 by USDA, Economic Research Service.

Source: USDA, Economic Research Service, Farm Income and Wealth Statistics. Data as of September 3, 2025.

- '25 Feed expenses (F) at $68.6B, down by $4.6B (6.2%) compared with 2024.
- '25 Livestock and poultry purchases (F) at $59.9 billion, rising by $10.6 billion (21.5%) compared with 2024.
- '25 Labor expenses (F) at $54.3 billion, rising by $2.2 billion (4.2%) compared with the 2024 level.

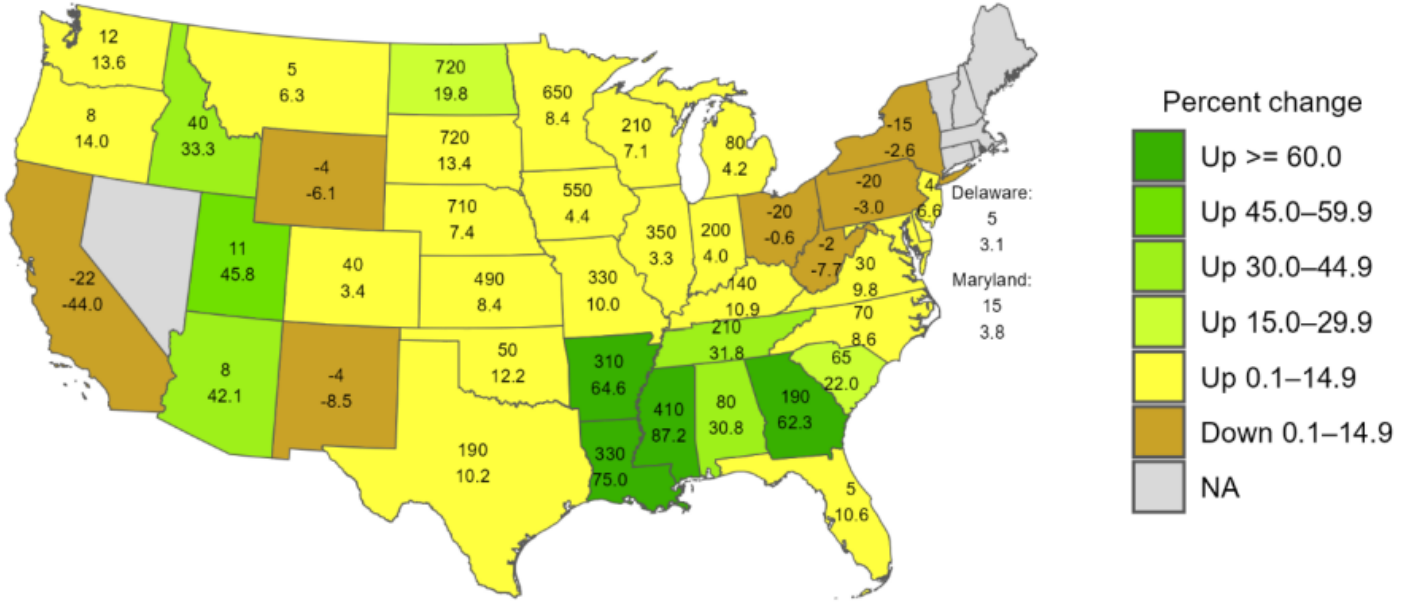
Farm Expenses



- Pesticide expenses (spending on agricultural chemicals and application costs) and fuel and oil expenses are forecast to fall in 2025 relative to 2024
- Interest expenses and net rent are forecast to rise.

2025/26 Marketing Year for Corn

Corn area harvested for grain changes between 2024/25 and 2025/26 by U.S. State,1,000 acres (top number) and percent (bottom number)



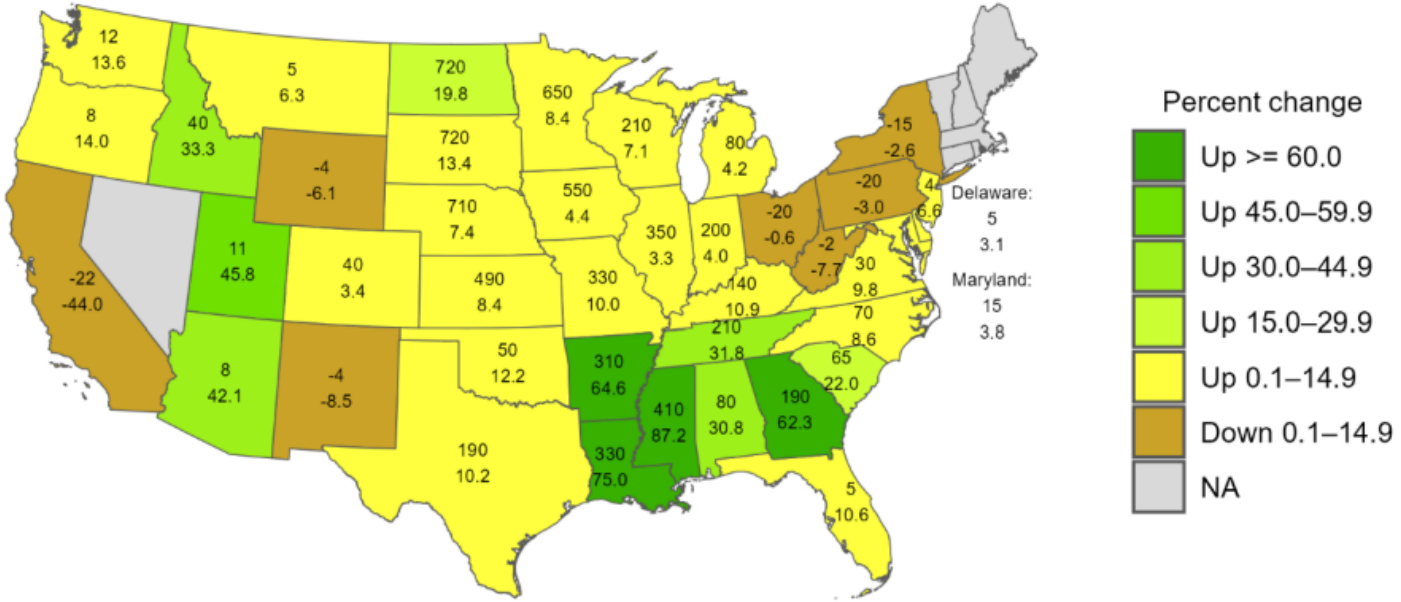
Note: NA = not applicable, denotes States for which corn acres harvested for grain were not reported for one or both years. Harvested acres for 2024/25 are estimates and the 2025/26 harvested acreages are projections.
Source: USDA, Economic Research Service based on data from USDA, National Agricultural Statistics Service.

- Planted and harvested area were both raised 2% from their prior estimates to 98.7 million and 90.0 million acres

USDA Sept. Crop Progress Report

2025/26 Marketing Year for Corn

Corn area harvested for grain changes between 2024/25 and 2025/26 by U.S. State,1,000 acres (top number) and percent (bottom number)



Note: NA = not applicable, denotes States for which corn acres harvested for grain were not reported for one or both years. Harvested acres for 2024/25 are estimates and the 2025/26 harvested acreages are projections.
Source: USDA, Economic Research Service based on data from USDA, National Agricultural Statistics Service.

- Corn yields for 2025 were lowered modestly from the August forecast, down 2.1 bushels per acre to **186.7 bushels** and remain at a record-high level

USDA Sept. Crop Progress Report

2025/26 Marketing Year for Soybeans

- (MY) 2025/26 soybean production is at 4.3 billion bushels, 8.0 million bushels higher than the previous month's forecast. The production forecast is raised on higher acreage.
- The soybean yield forecast for MY 2025/26 stands at 53.5 bushels per acre, 0.1 bushels per acre lower than the previous estimate.
- The U.S. soybean export forecast is reduced this month to 1.69 billion bushels. Soybean crush is raised to 2.56 billion bushels, on higher soybean meal demand.
- Ending stocks for MY 2025/26 are projected at 300 million bushels, 10 million bushels higher than last month's forecast.
- The MY 2025/26 soybean season-average farm price forecast is lowered by 10 cents to $10 per bushel.
- The soybean meal and soybean oil prices are forecast to be unchanged, at $280 per short ton and 53 cents per pound, respectively.

USDA Sept. Crop Progress Report

So the theme today…

- Exploring the **potential of value-added and product differentiation opportunities** in Virginia agriculture
- Reviewing **two key financial tools** for strategic decision-making:

  1. **Partial Budgets** – for **short-term decisions** and incremental changes
  2. **Income Statements** – for **longer-term financial evaluation** and performance tracking

- Understanding **how these tools can help assess the financial potential** of new ideas and enterprise adjustments
- Grateful to have **Colonial Farm Credit and Hodo Foods** for joining us as we explore value-added ventures and diversification strategies

Agenda

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