



25th Annual Southern Peanut Growers Conference
General Session II "Setting a New Course for Peanuts"
Westin Savannah Harbor Golf Resort
July 17-19, 2024
Savannah, GA

U.S. Peanut Consumption, Use, and Alternative Markets



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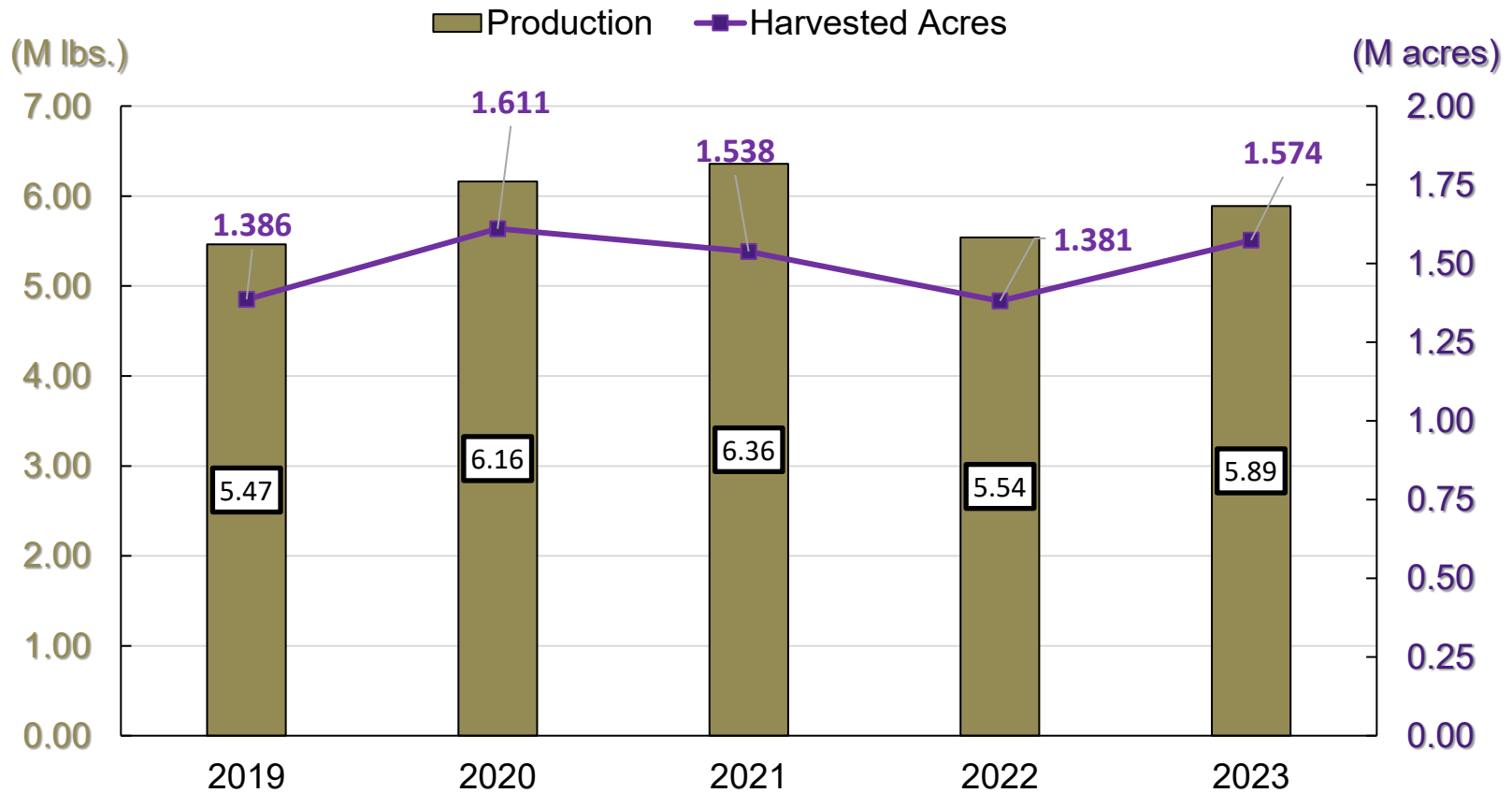
Louisiana State University Agricultural Center

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U.S. Peanut Production

Five-year Summary of Acreage and Production



U.S. Peanut Supply and Use

2022/23 and 2023/24 Marketing Year Comparison

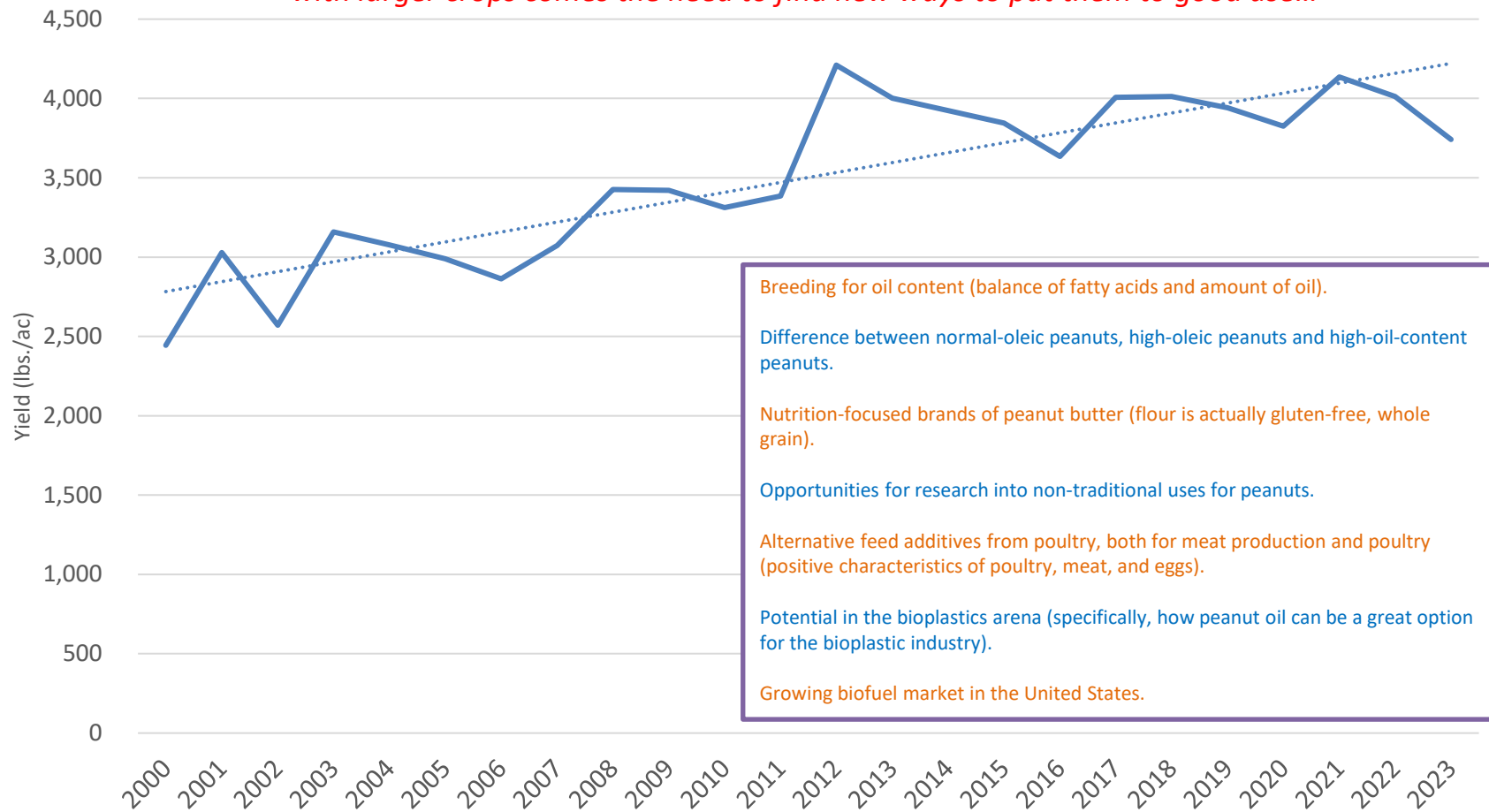
Total U.S. <u>Peanuts</u>	2022/23 (M lbs.)	2023/24 (M lbs.)	Percent Change
Beginning stocks	2,360	2,032	-13.9%
Production	5,542	5,890	+6.3%
Imports	103	105	+1.9%
Total Peanut Supply	8,005	8,027	+0.3%
Crush	795	675	-15.1%
Exports	1,196	1,450	+21.2%
Food	3,201	3,221	+0.6%
Seed, Loss, Shrink, Residual	781	729	-6.6%
Total Peanut Use	5,973	6,075	+1.7%
Ending stocks	2,032	1,952	-3.9%
Stocks-to-Use Ratio	34.02%	32.13%	
Season Average Farm Price	\$0.268	\$0.270	

Source: USDA ERS. Oil Crops Data: Yearbook Tables, March 2024

U.S. Peanut Yield per acre

Historical data for yield per harvested acre

“with larger crops comes the need to find new ways to put them to good use...”



Breeding for oil content (balance of fatty acids and amount of oil).

Difference between normal-oleic peanuts, high-oleic peanuts and high-oil-content peanuts.

Nutrition-focused brands of peanut butter (flour is actually gluten-free, whole grain).

Opportunities for research into non-traditional uses for peanuts.

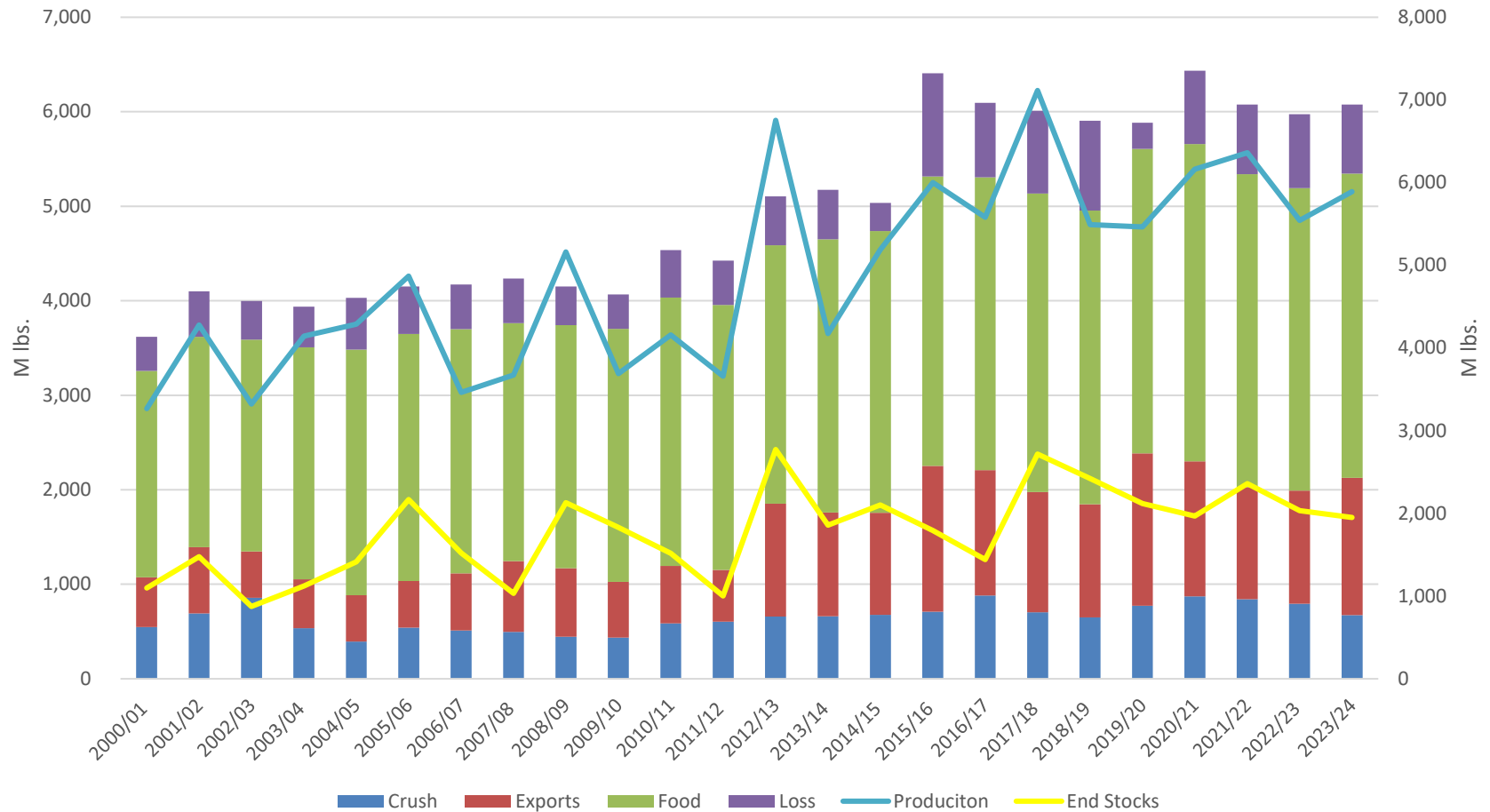
Alternative feed additives from poultry, both for meat production and poultry (positive characteristics of poultry, meat, and eggs).

Potential in the bioplastics arena (specifically, how peanut oil can be a great option for the bioplastic industry).

Growing biofuel market in the United States.

U.S. Peanut Use, Production, and Ending Stocks

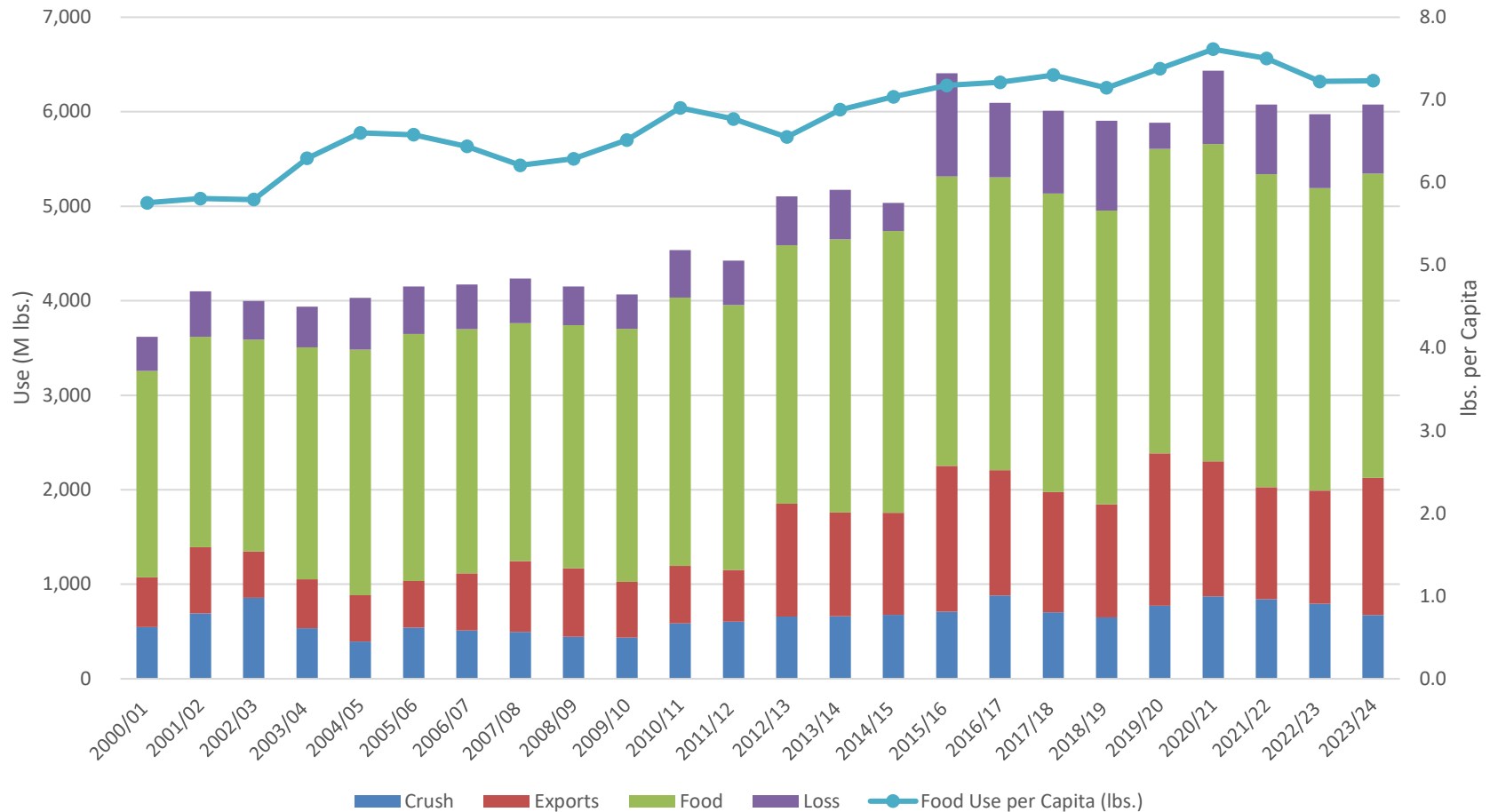
Historical comparison (2000/01 to 2023/24)



Source: USDA ERS. Oil Crops Data: Yearbook Tables, March 2024

U.S. Peanut Use and Food Use per Capita

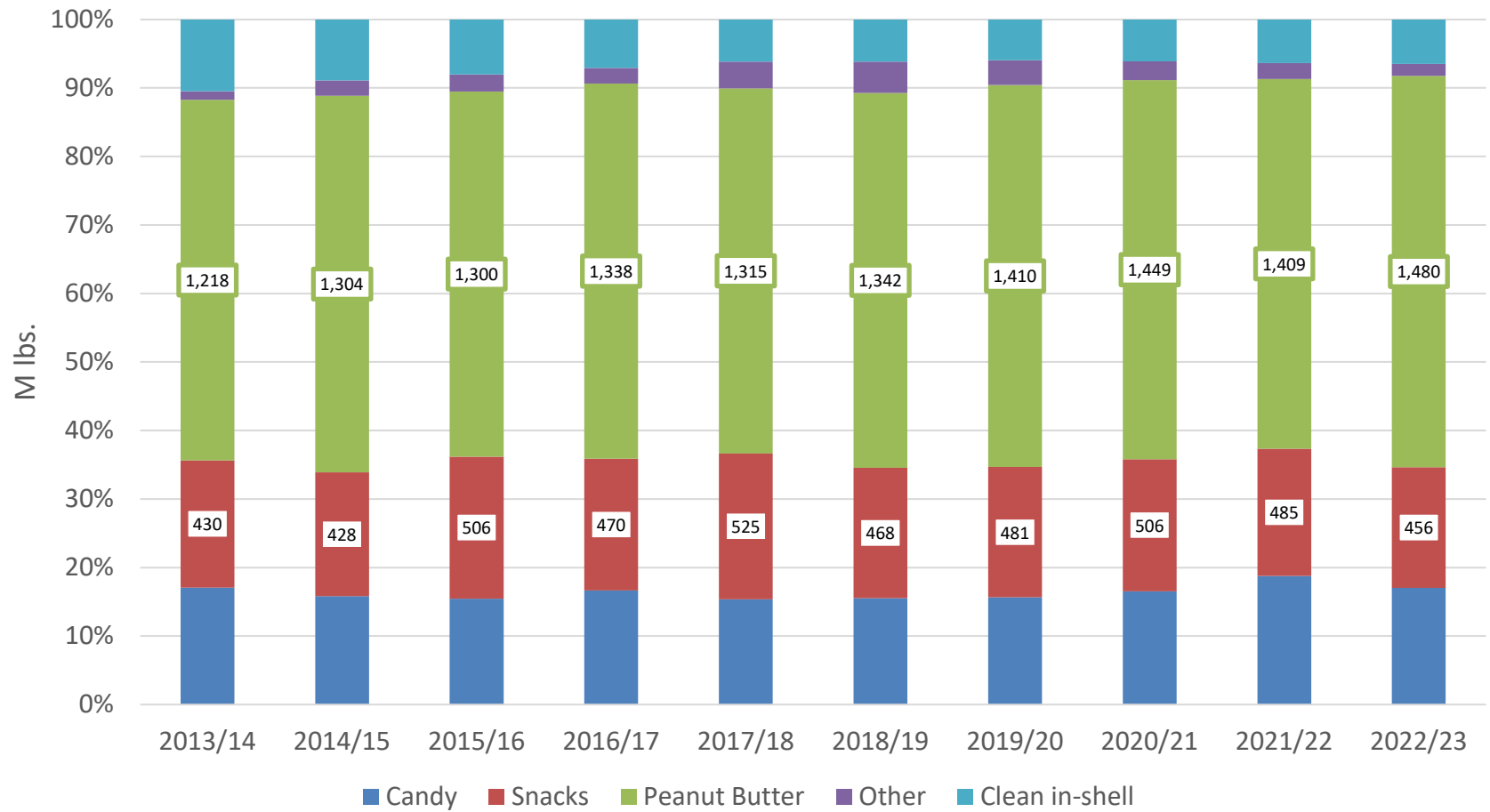
Historical comparison (2000/01 to 2023/24)



Source: USDA ERS. Oil Crops Data: Yearbook Tables, March 2024

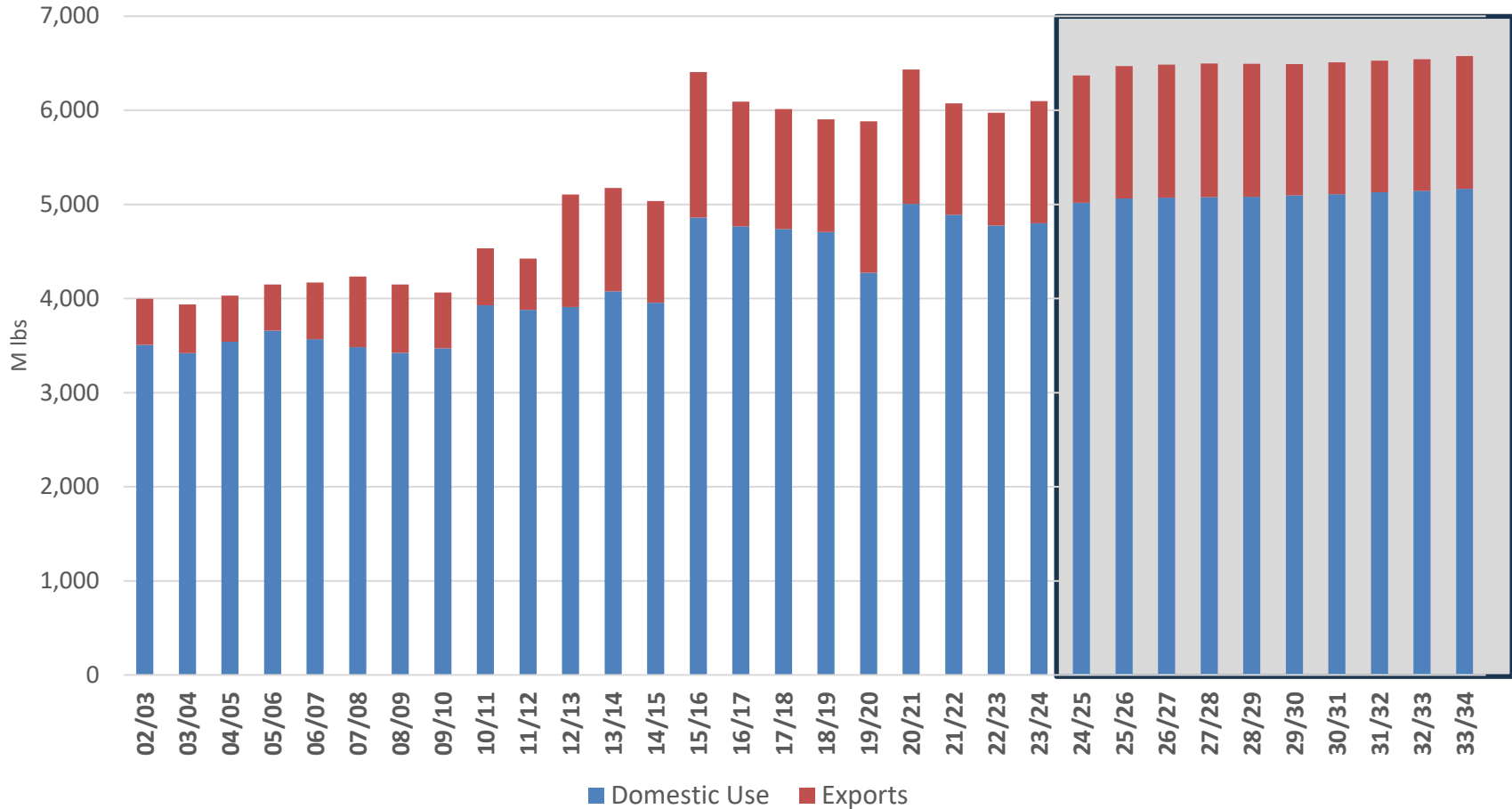
U.S. Food Uses of Peanuts

Previous ten-year comparison



U.S. Total Peanut Use and Projected Use

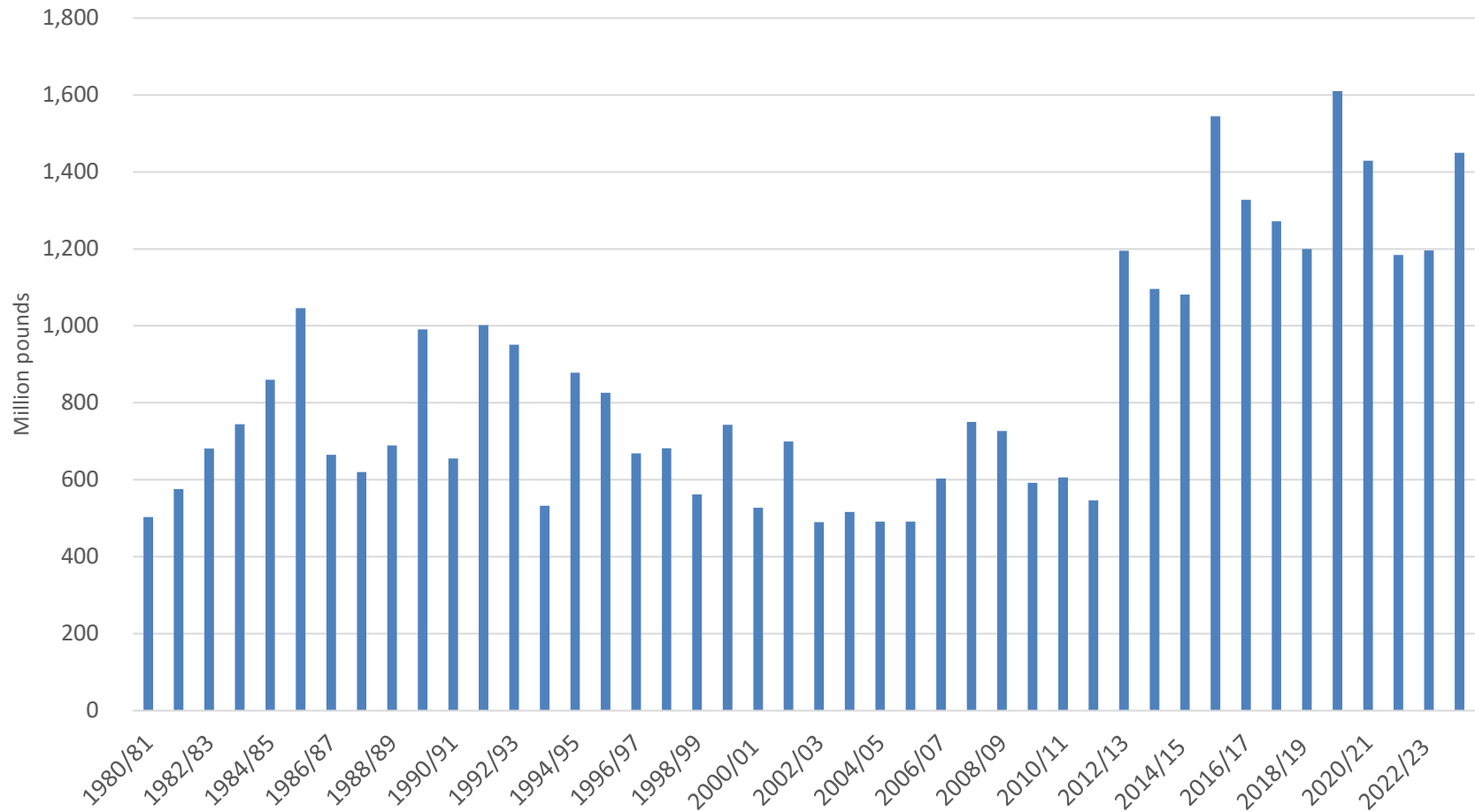
Domestic use and export categories of the balance sheet to 2033/34



Source: USDA ERS and University of Missouri FAPRI.

U.S. Peanut Export Demand

Total export demand

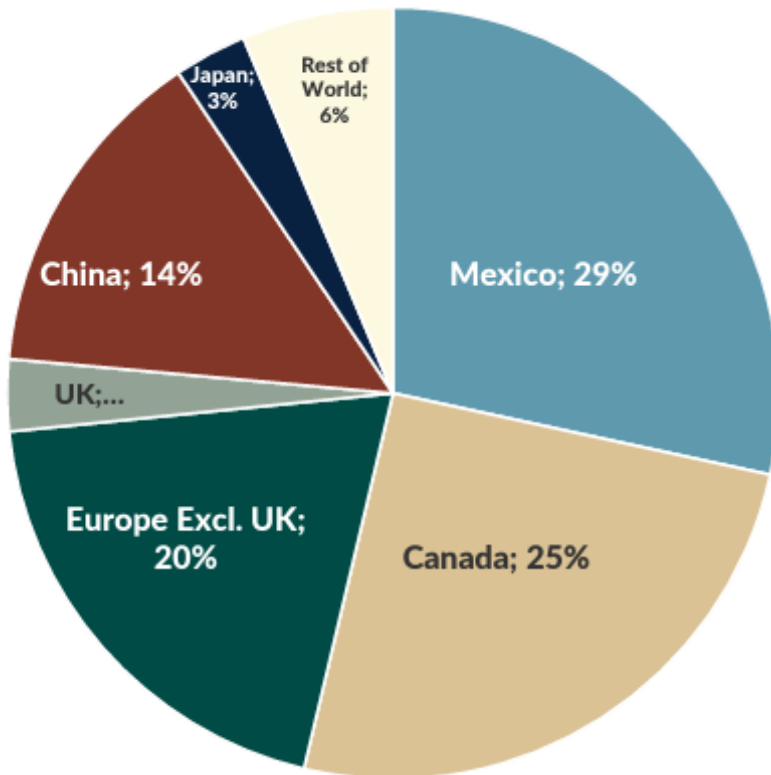


Source: USDA ERS Oilseed Yearbook.

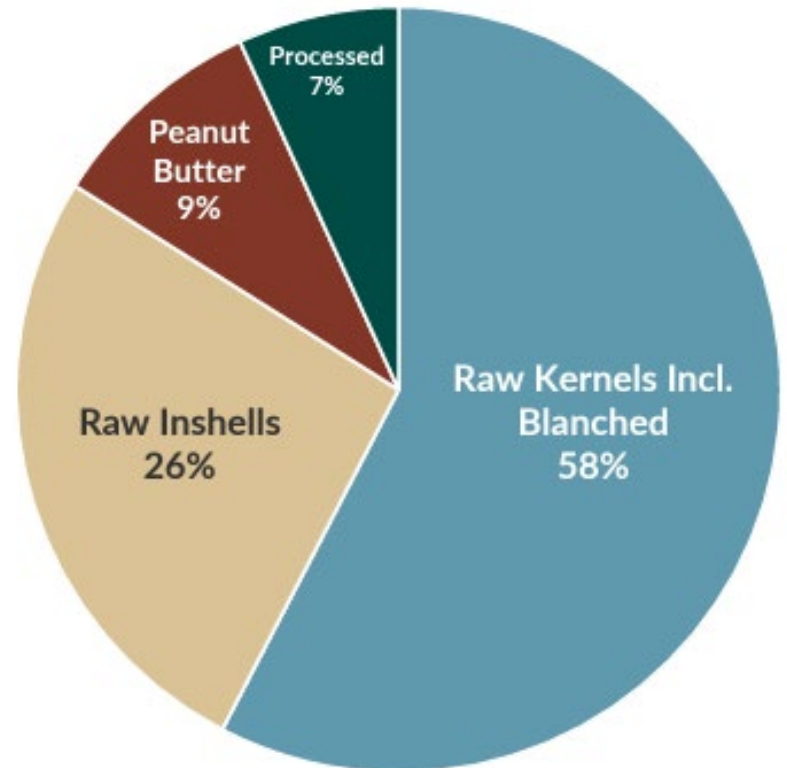
U.S. Peanut Exports

Market and product profiles for 2023

Exports by Market



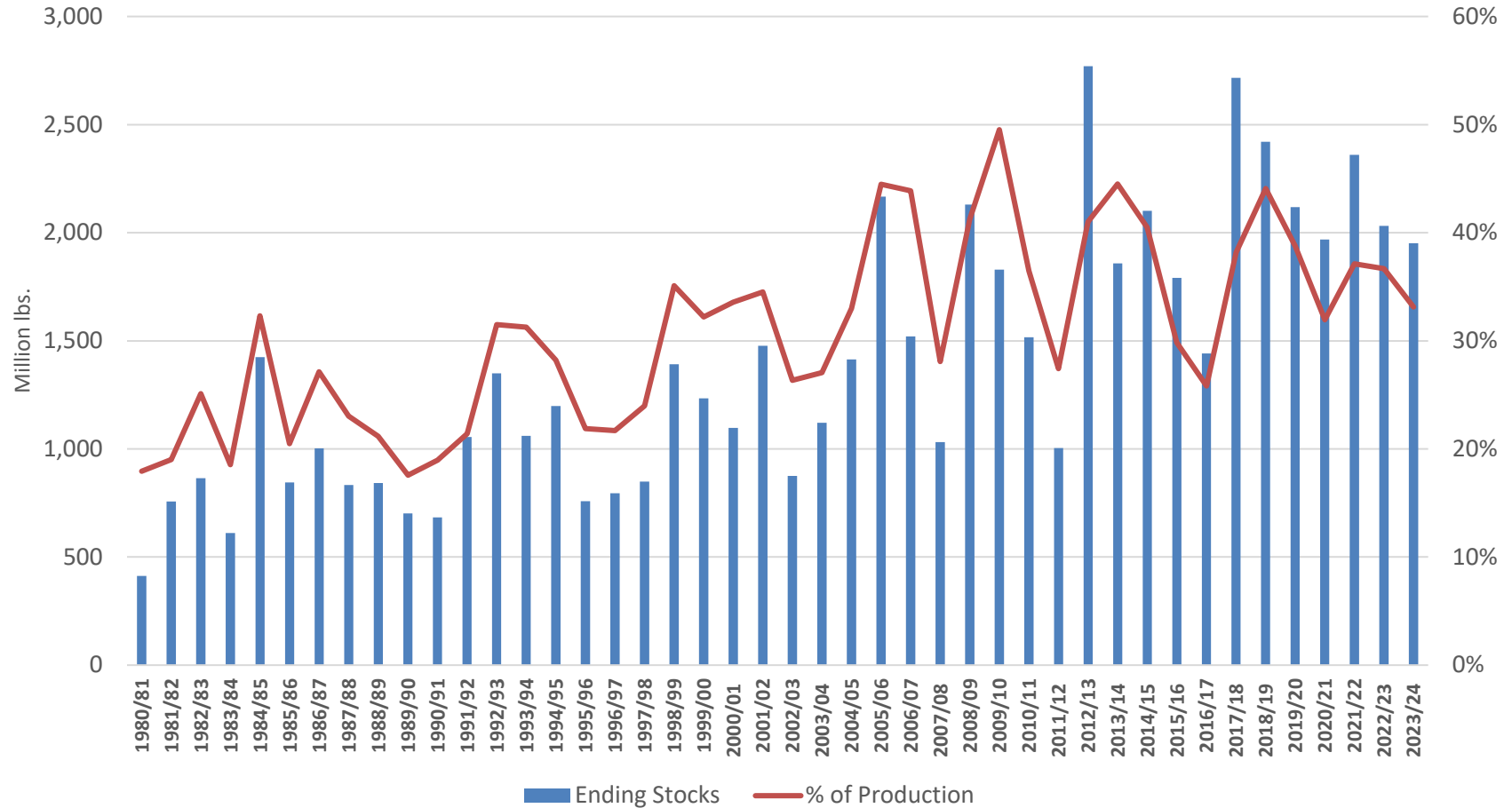
Exports by Product



Strategy: Grow PB exports, develop new markets, accelerate Mexican peanut consumption, defend key U.S. markets, and advocate with a science-based regulatory voice.

U.S. Peanut Ending Stocks

Ending stock levels expressed as a percentage of production



Source: USDA ERS.

U.S. Runner Peanut Price

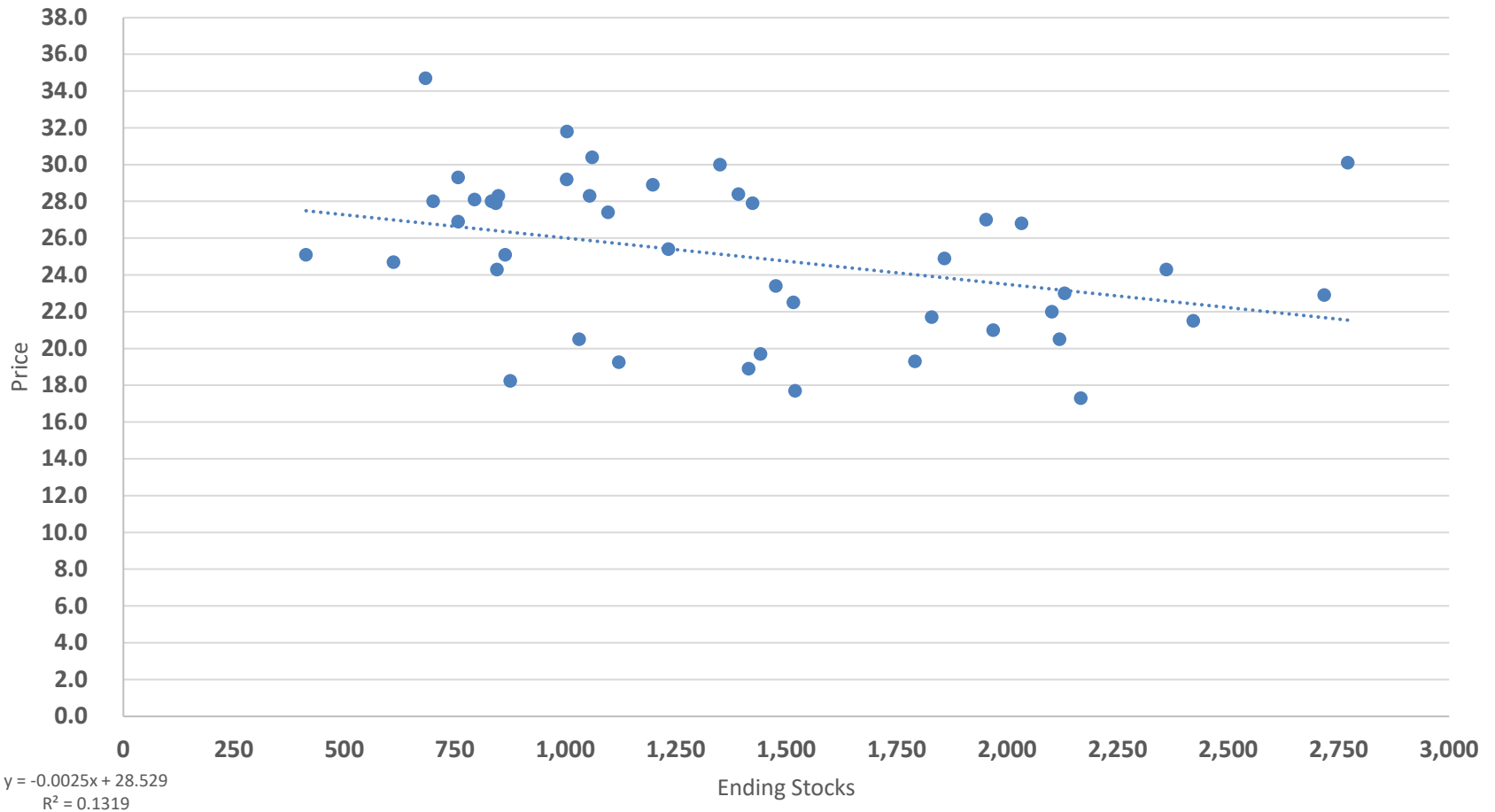
Peanuts average 26.9 cents for the week ending July 6, 2024



Source: USDA NASS. Peanut Prices. July 12, 2024.

U.S. Peanuts Ending Stocks and Price

Using a trend to gain insight about the relationship between the two



Source: USDA ERS.

U.S. Peanut Supply and Use Projections

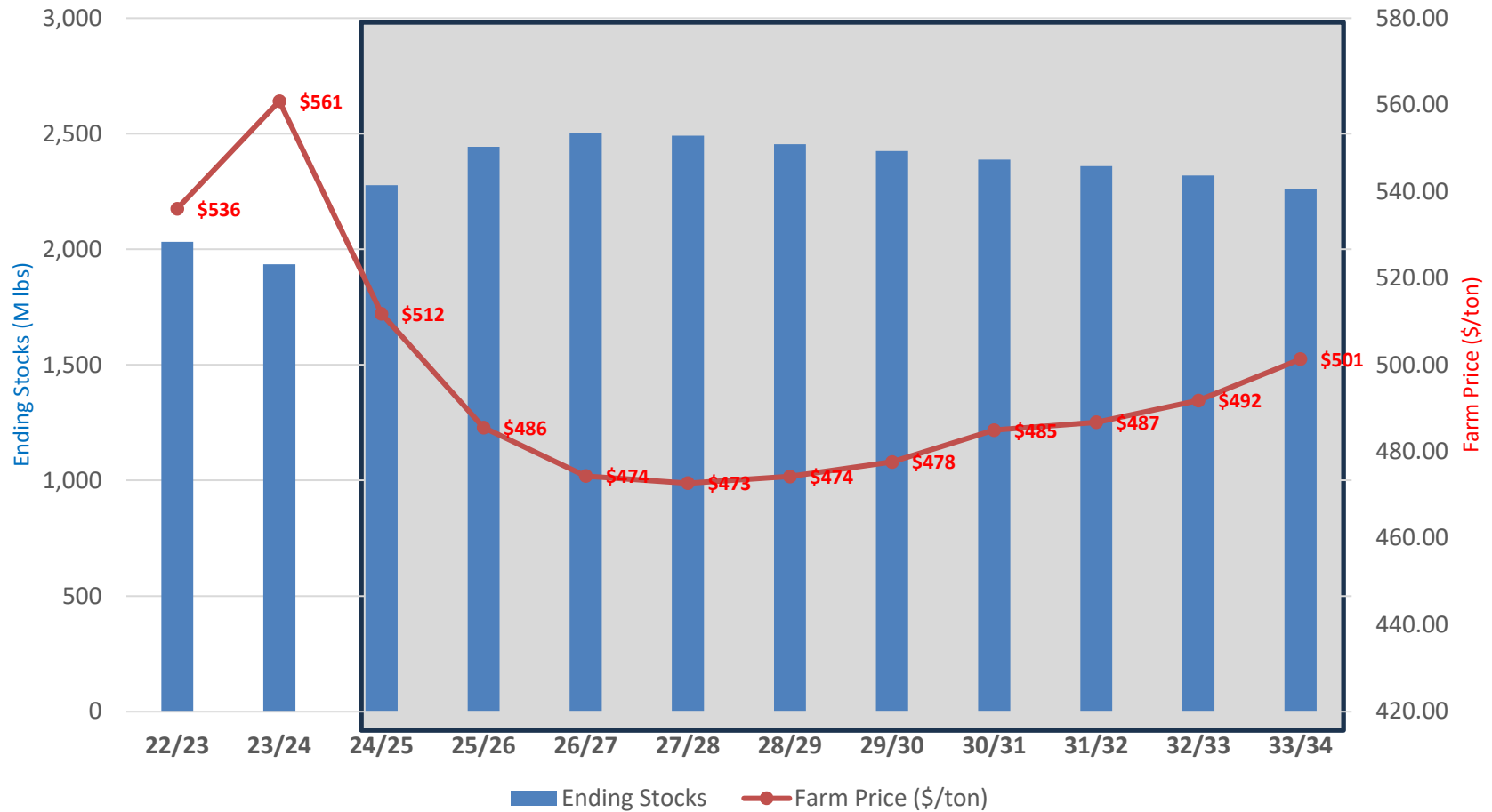
Current and long-term projections

August-July year	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34
Area	(Million acres)										
Planted area	1.65	1.71	1.68	1.65	1.63	1.61	1.61	1.60	1.61	1.60	1.60
Harvested area	1.57	1.64	1.62	1.59	1.57	1.55	1.55	1.55	1.55	1.54	1.54
Yield	(Pounds per harvested acre)										
Yield	3,742	4,024	4,038	4,054	4,072	4,088	4,103	4,119	4,134	4,148	4,164
Supply and use	(Million pounds)										
Production	8,032	8,646	8,912	8,987	8,987	8,949	8,915	8,897	8,888	8,862	8,838
Imports	109	109	109	109	109	109	109	109	109	109	109
Domestic use	4,799	5,016	5,063	5,072	5,078	5,082	5,096	5,108	5,129	5,146	5,166
Exports	1,298	1,353	1,406	1,411	1,418	1,412	1,394	1,402	1,399	1,398	1,410
Ending stocks	1,935	2,277	2,443	2,504	2,491	2,455	2,425	2,388	2,359	2,319	2,262
Prices, program provisions	(Dollars per ton)										
Farm price	560.83	511.78	485.52	474.34	472.68	474.21	477.59	484.93	486.72	491.76	501.32
Target/effective reference price	535.00	535.00	535.00	535.00	535.00	535.00	535.00	535.00	535.00	535.00	535.00
Market net return per acre	317.93	326.84	304.14	292.24	286.57	284.10	286.78	296.62	293.49	294.62	304.34
Marketing loan benefits per acre*	0.00	1.65	2.71	3.81	3.36	3.27	3.72	3.83	3.17	2.94	2.55
Payments to participants											
PLC per base acre*	0.95	55.74	81.78	96.98	99.24	97.10	94.36	88.54	92.53	86.20	75.13
ARC per base acre*	15.02	21.04	27.70	31.38	28.59	29.85	30.91	28.64	26.67	24.50	21.99

* Marketing loan benefits are averaged across all acres. ARC and PLC payments are per participating acre.

U.S. Peanut Ending Stocks with Projections

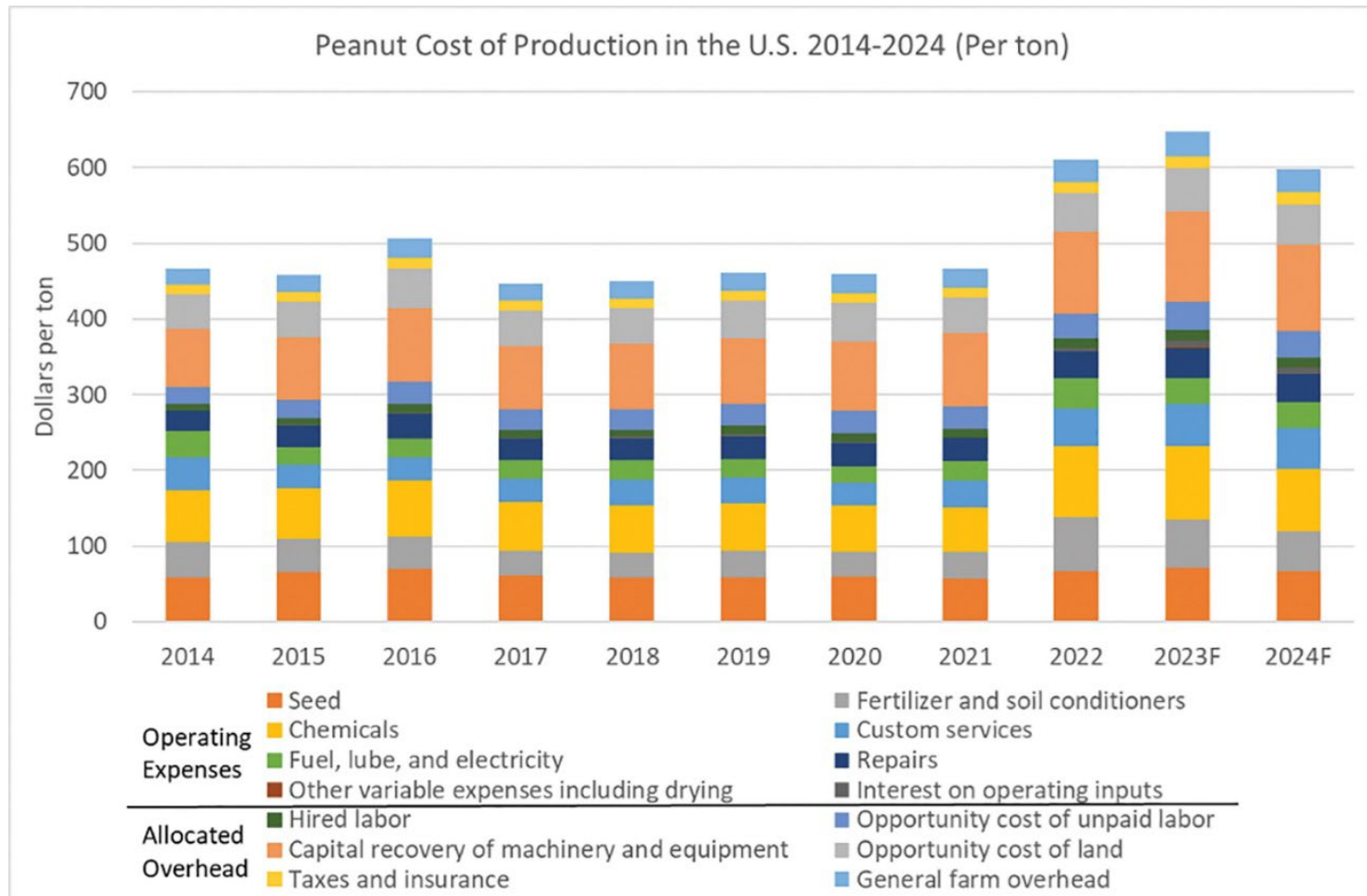
Current and long-term projections with expected farm price (\$/ton)



Source: University of Missouri, FAPRI, March 2024 Baseline Report.

U.S. Peanut Cost of Production

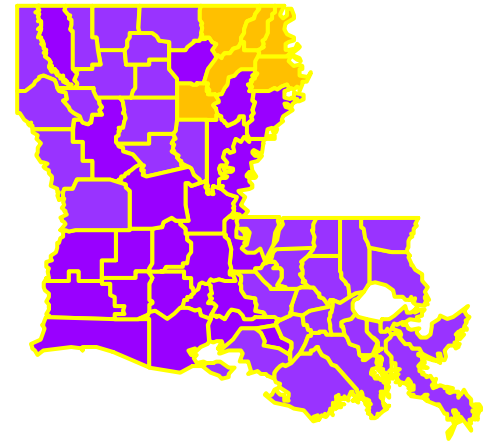
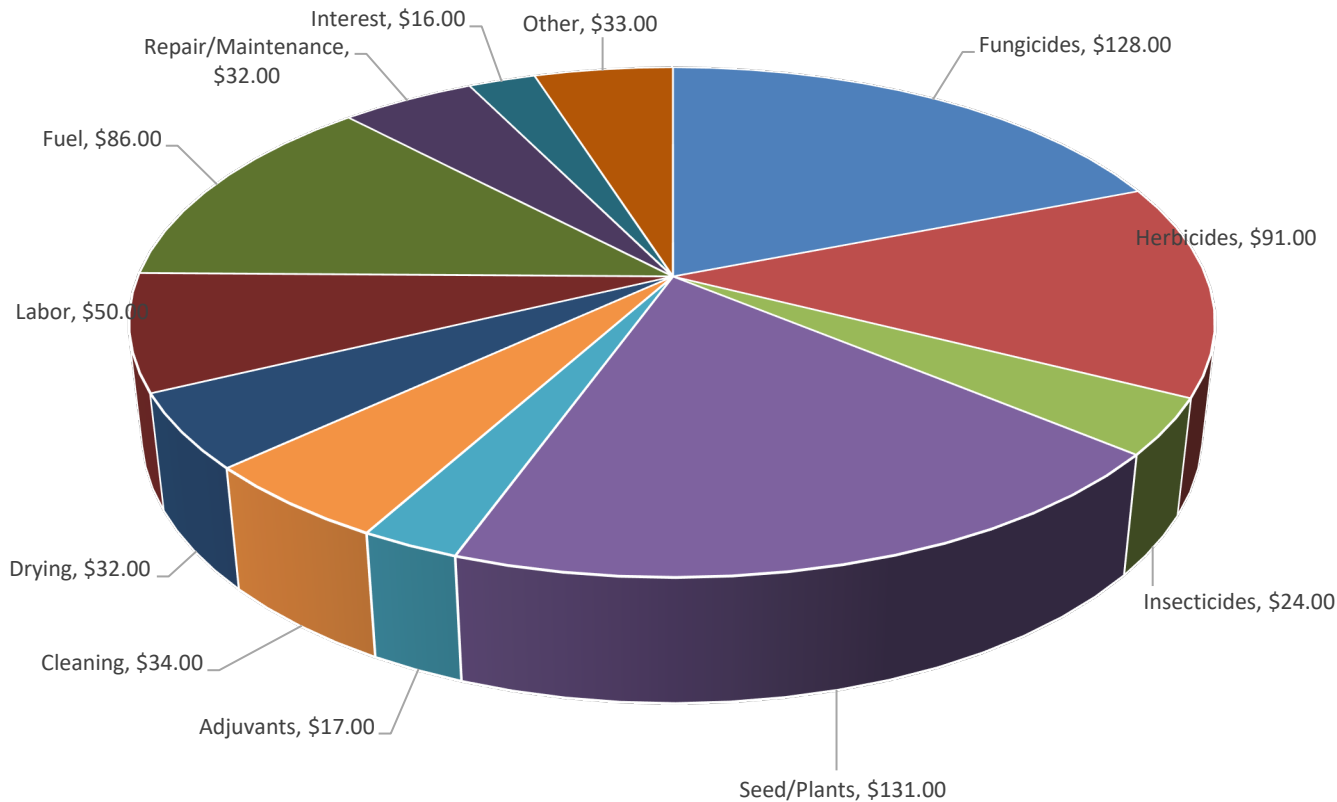
USDA ERS data on the farm cost per ton of peanuts produced



Source: A. Rabinowitz. Southern Ag Today, January 2024.

Louisiana/Mississippi Peanut Cost of Production

Estimated 2024 total direct expenses for irrigated production at \$674/ac



Alternative Markets

Creating, finding, and securing new market opportunities is a challenge

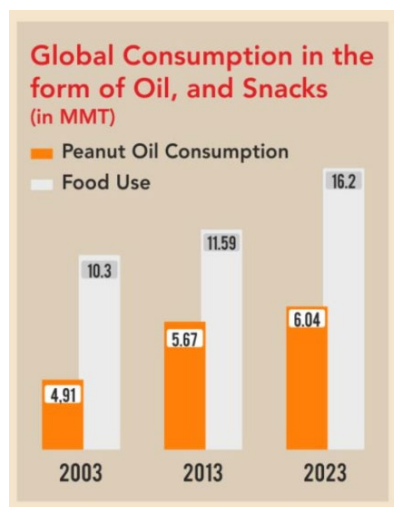
- Adding value to commodities in different ways
- Understanding consumer demand
- Accessing markets



World Peanut Production, Crush, and Oil Production

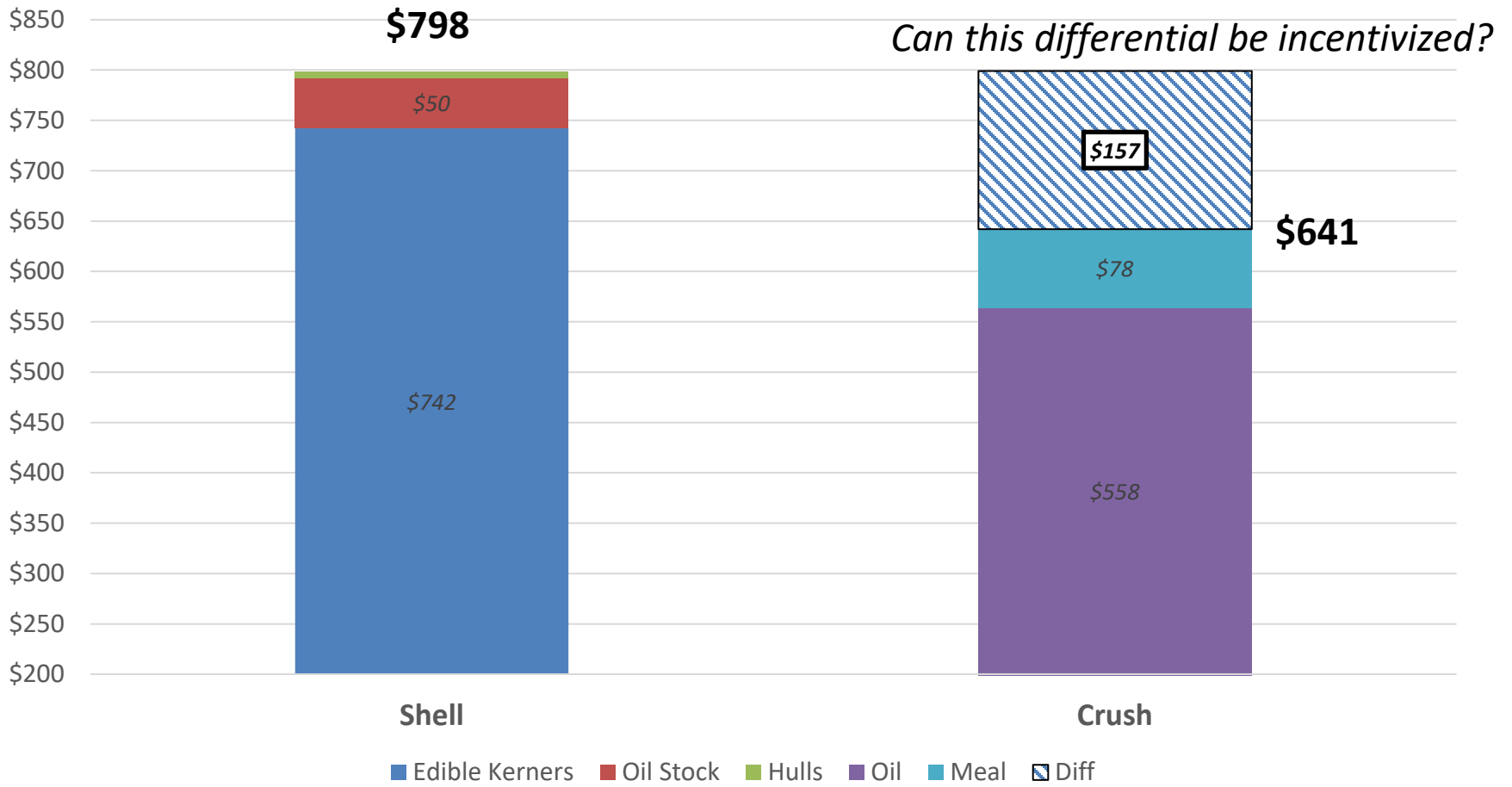
Data from the USDA Foreign Ag Service (MMT)

	Production	Crush	Oil Production
2020/21	50.49	19.68	6.38
2021/22	51.97	19.83	6.44
2022/23	49.41	19.15	6.22
2023/24	48.82	18.38	5.97
2024/25	51.32	19.28	6.26



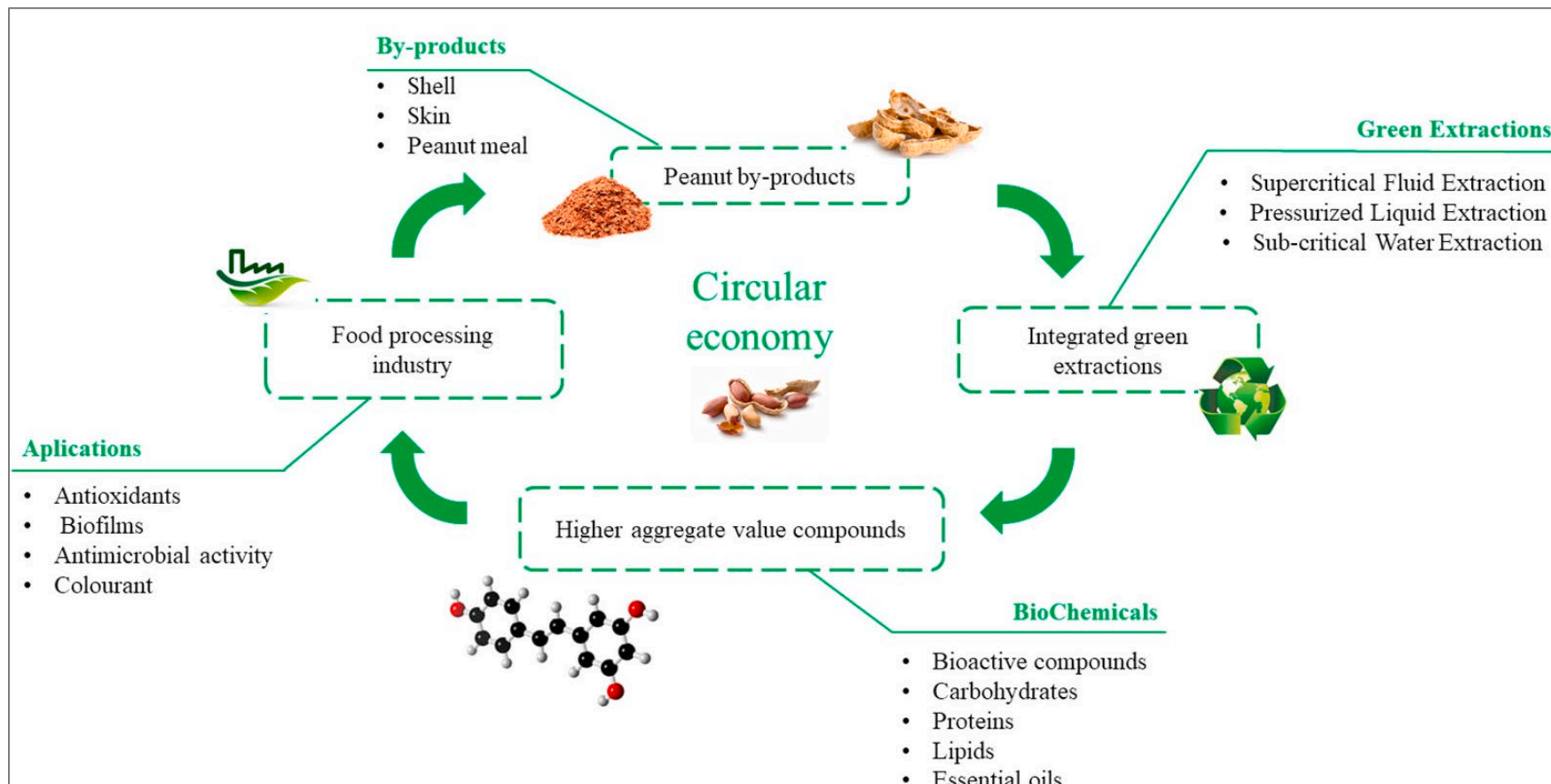
The Opportunity for Peanut Oil in the U.S.

An economic comparison of shelling versus crushing for oil (60% oil content)



Circular Economy for Peanuts

Enhancing the value chain by exploring technologies for by-product recovery



The Potential of Peanut Shells

Shells be converted into many bioproducts with commercial applications



• Hydrogen production

• Bio-ethanol

• Biodiesel

• Building material

• Carbon nano-sheet

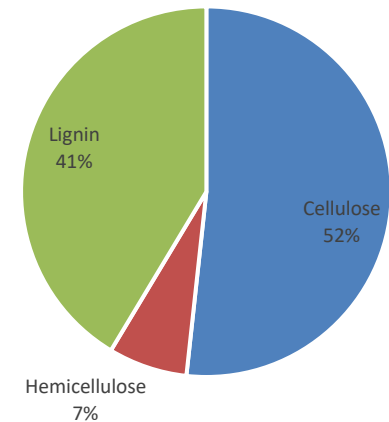
• Heavy metal adsorption

• Dye degradation

• SCP production

Adapted from Duc et al. 2019

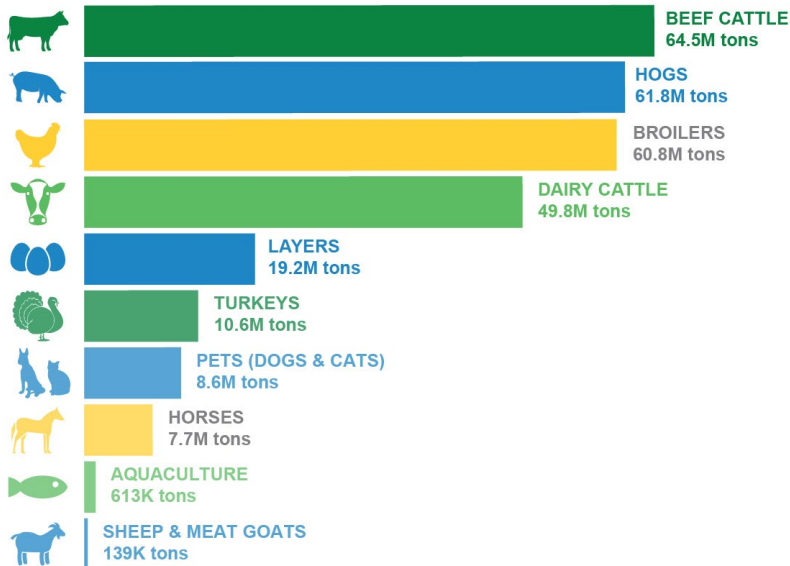
The peanut Shell is a fibrous and lignocellulosic structure.



The Potential of Peanuts in Animal Feedstocks

Poultry market is estimated at 60 MMT

THE DEMAND FOR ANIMAL FOOD IS STRONG



In 2019, nearly 284 million tons of animal food were consumed by domestic livestock and pets.

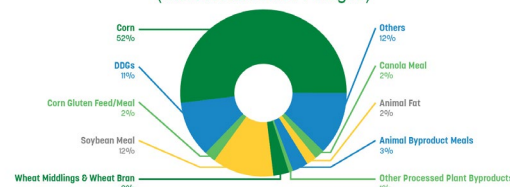
North America* Compound Feed Production

	2021	2022	Growth (MMT)	Growth (%)
Beef	66.772	67.355	0.429	0.64%
Pig	63.600	62.984	(0.616)	-0.97%
Broiler	58.200	60.132	1.932	3.32%
Dairy	28.700	28.500	(0.200)	-0.70%
Layer	15.120	15.530	0.410	2.71%
Pets	10.600	11.200	0.600	5.66%
Equine	3.778	3.800	0.022	0.58%
Aqua	1.730	1.750	0.020	1.16%
TOTAL	259.367	261.639	2.272	0.88%

Source: 2023 Alltech Agri-Food Outlook

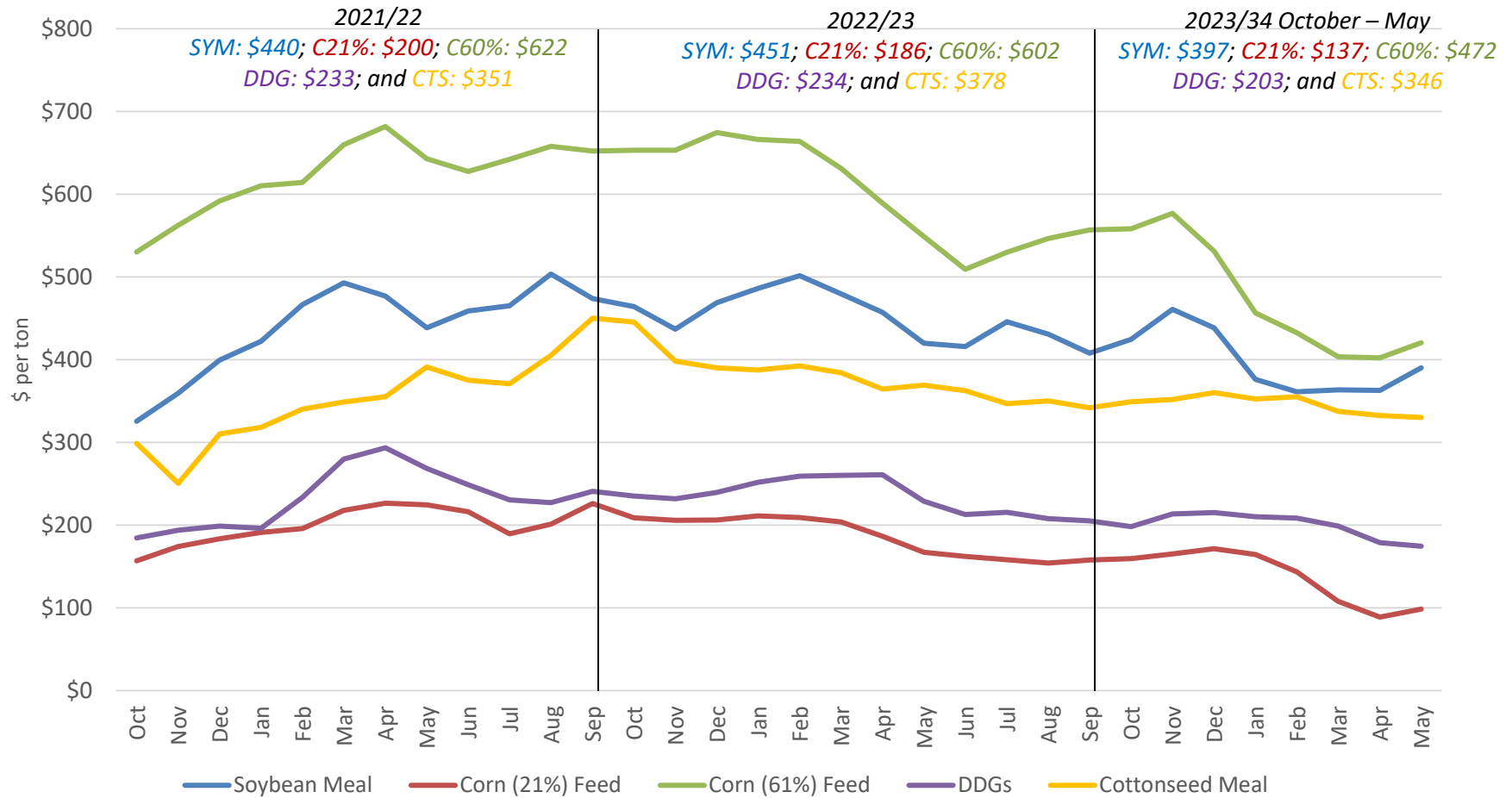
*North America includes Canada and the U.S.

TOTAL ANIMAL FEED COMPOSITION (without Harvested Forages)



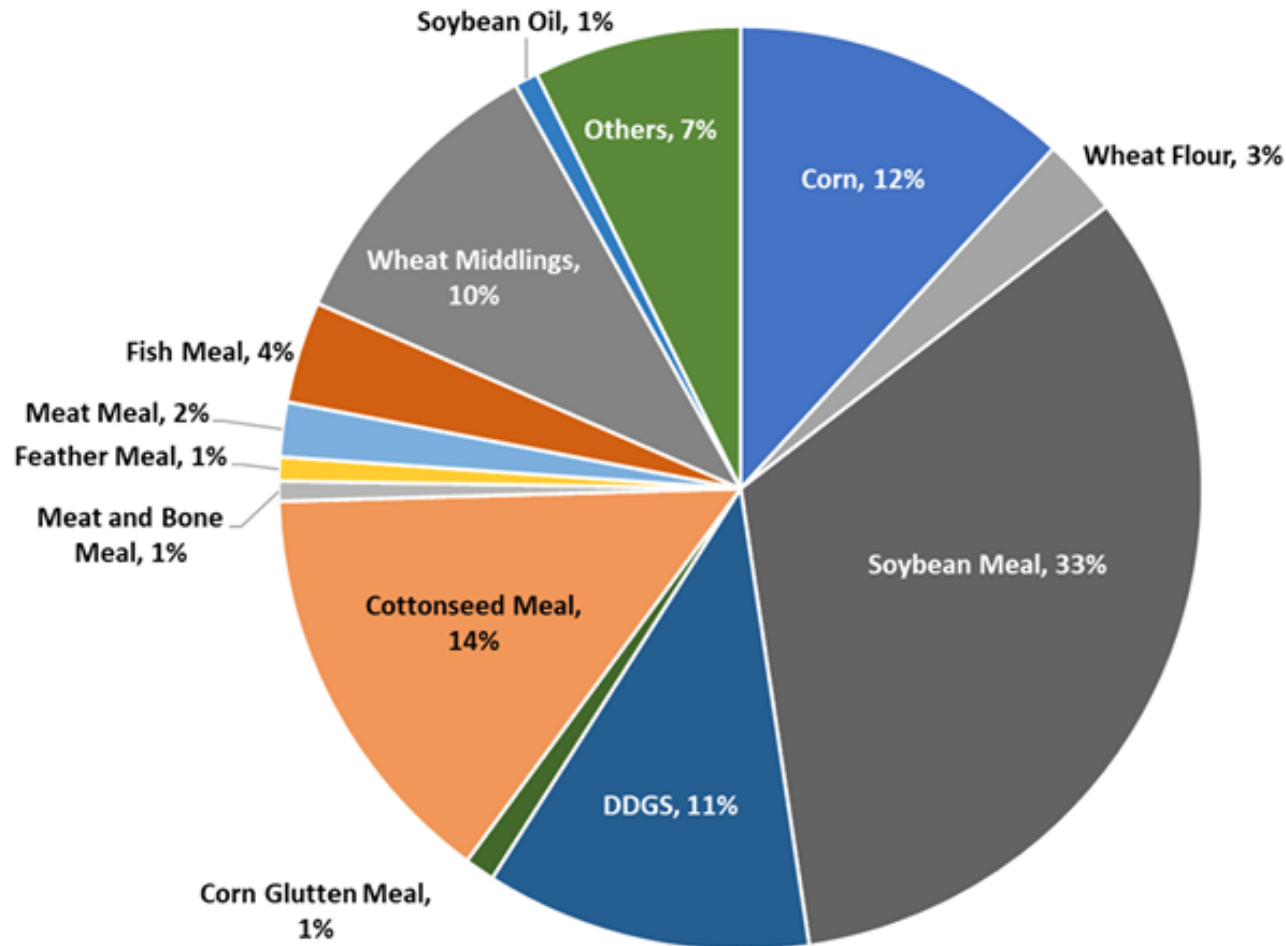
Feed and Feed By-product Price Comparison

Prices since 2021/22 (\$ per ton for the Oct-Sep marketing year)



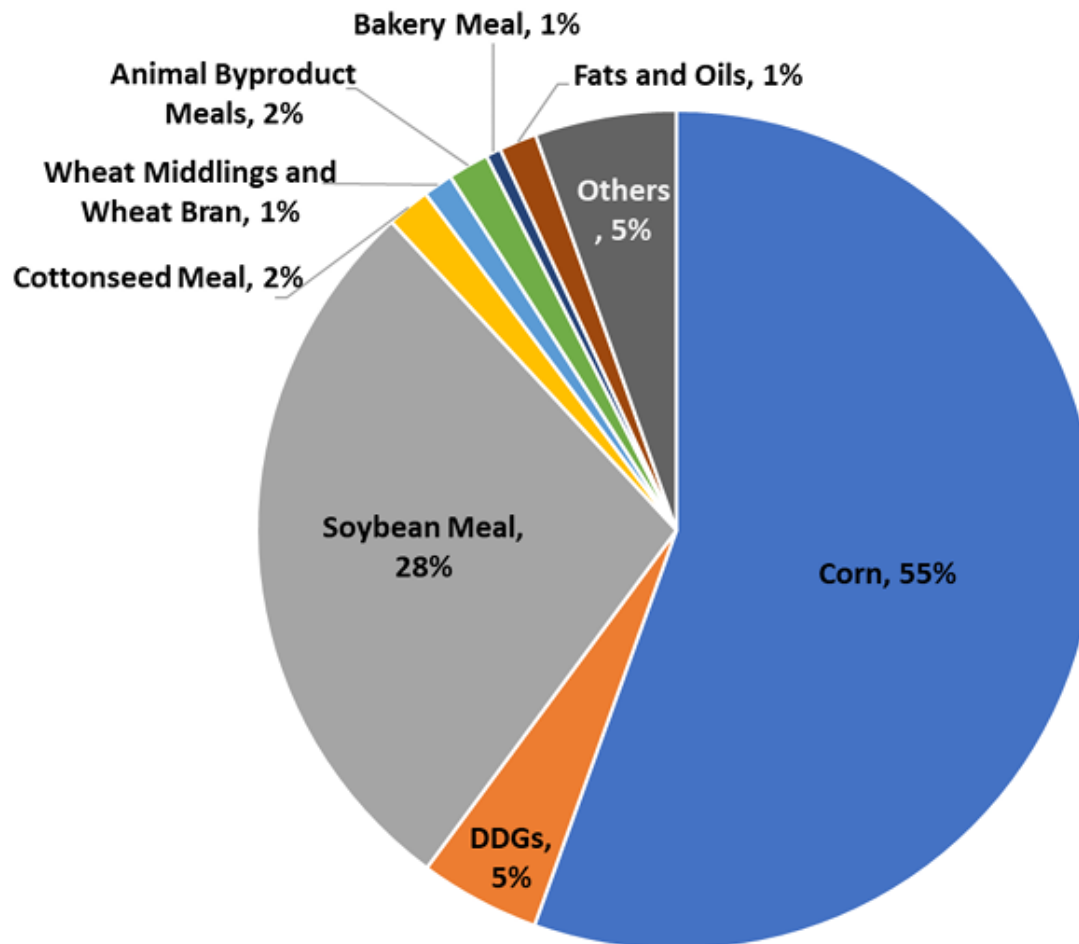
Aquaculture Diet Composition

33% soybean meal, cottonseed meal (14%) and DDGs (11%)



Broiler Diet Composition

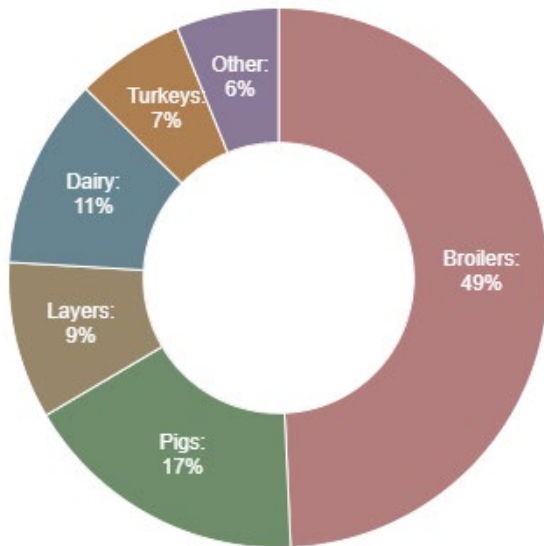
55% corn, adding soybean meal (28%) and DDGs (5%) represents >88%



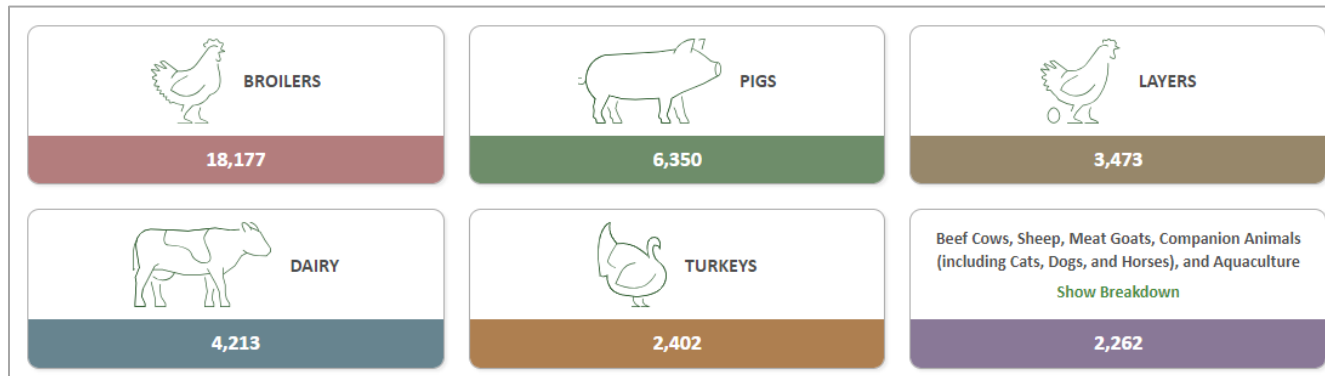
A Profile on U.S. Soybean Meal Consumption

Soybean meal (58%) used via poultry feed rations

All figures in thousands of tons.












Broiler and Layer Share	Market Share (in Tons)
1%	216,500
2%	433,000
.	.
100%	21,650,000



The Market for Plant-based Foods

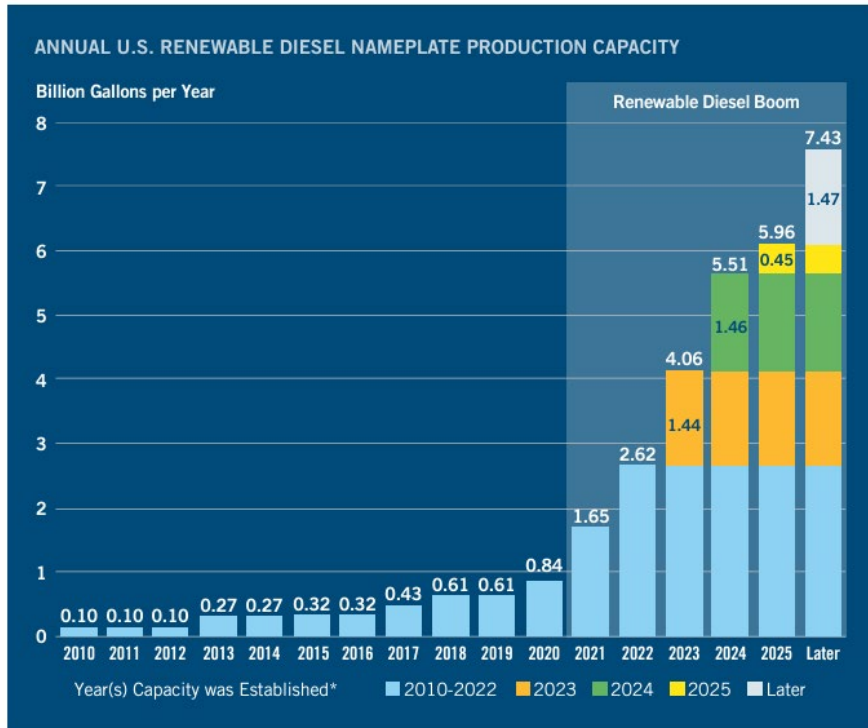
Key plant-based category sales metrics and purchasing dynamics (2023)

	 Dollar sales	 1-yr. dollar growth	 2-year dollar growth	 Dollar share	 Unit sales	 1-yr. unit growth	 Unit share	 Household penetration	 Repeat rate
Total plant-based foods	\$8.1B	-2%	4%	1.1%*	1.8B	-9%	0.9%*	62%	81%
Plant-based meat and seafood	\$1.2B	-12%	-13%	0.9%**	215MM	-19%	1.2%**	15%	62%
Plant-based milk	\$2.9B	1%	9%	14.5%	744MM	-8%	12.9%	44%	79%

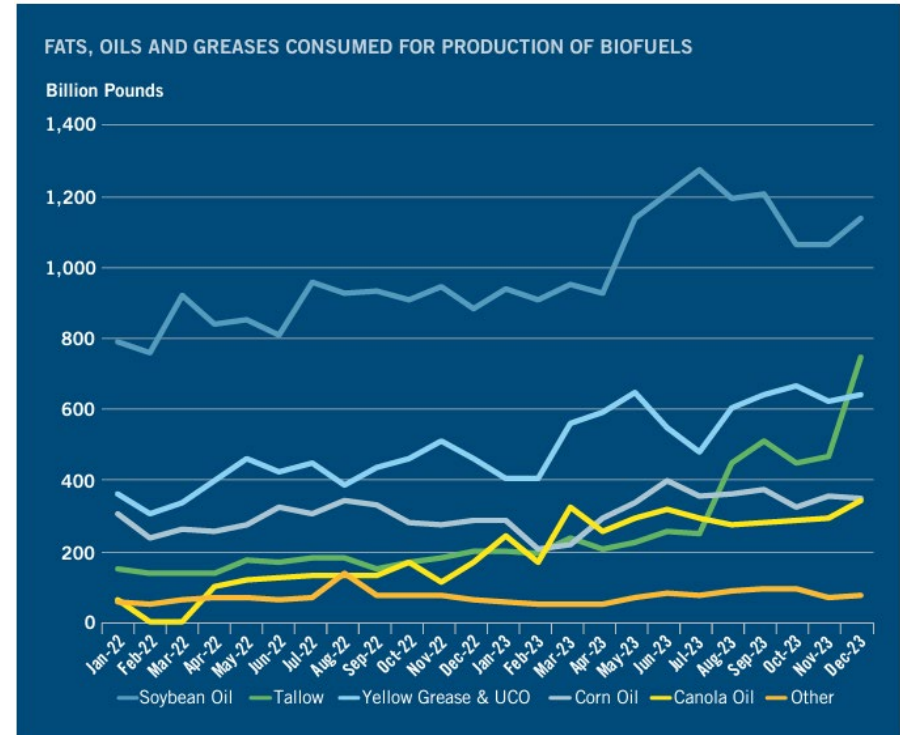
Source: Good Food Institute and Plant Based Food Association, 2023.

U.S. Renewable Diesel Demand

Production capacity projections and oils consumed in the production of biofuels



Source: EIA, Rener and Biodiesel Magazines, and other industry sources per farmdoc daily, March 29, 2023.
 *Actual for 2010-2022 and projected for 2023-2025 and later.



Source: EIA Monthly Biofuels Capacity and Feedstocks Update

Biodiesel Production from Peanuts

From the field to the fuel tank and the potential of the 'diesel nut'

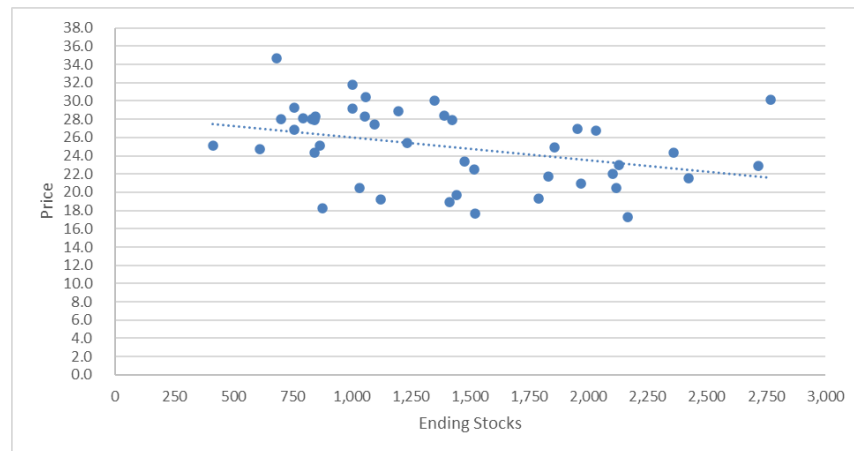
Crop	Gallons of Fuel per acre
Peanut	100+
Canola	75
Soybean	65

- Enterprise budgets show that peanuts cost from \$800-1,000 per acre to produce for non-irrigated and irrigated peanuts. If peanuts are to be profitable as a biofuel crop, a lower level of management would be necessary to reduce input costs at current fuel prices.
- Currently, food-grade peanut varieties have an oil content of approximately 48%. However, several high-oil breeding lines have around 55-60% oil content.
- With those yields, “diesel nut” peanuts could yield as much as 350 gallons of oil per acre, compared to soybeans’ current oil yields of approximately 25 to 50 gallons per acre.
- Possibilities to bring peanut production back to non-irrigated, rain-fed areas utilizing this high-oil germplasm. They will breed into these lines the qualities of improved disease and drought tolerance as well as continuing to increase oil content.

Revisiting U.S. Peanut Supply and Use

Impact of increased demand (use) on the balance sheet

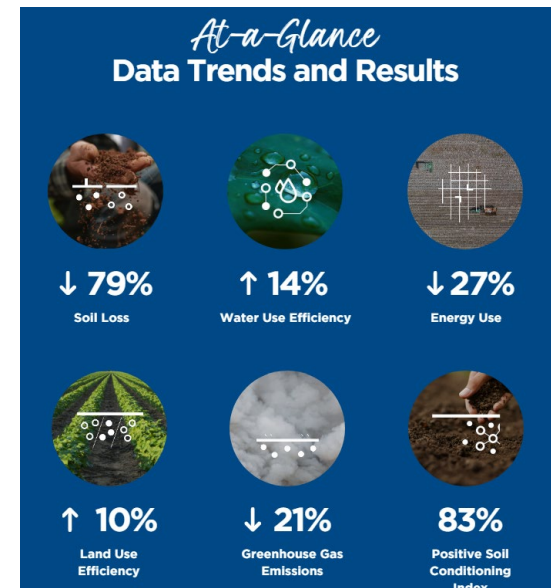
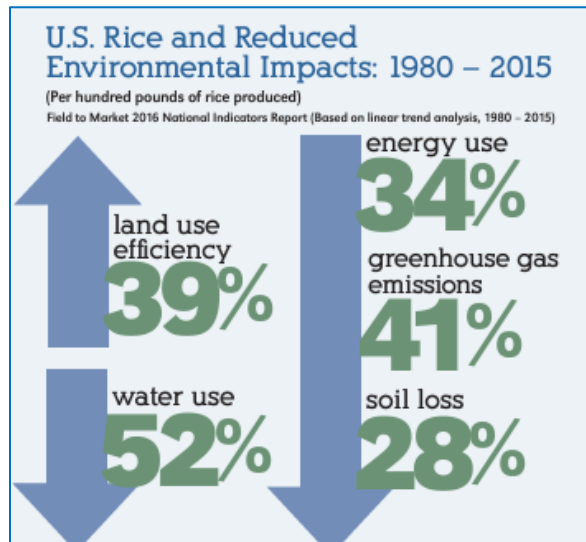
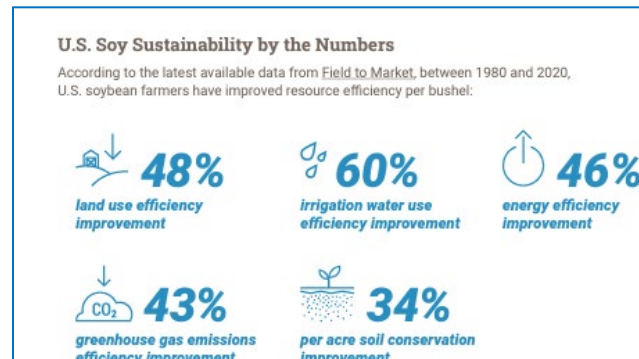
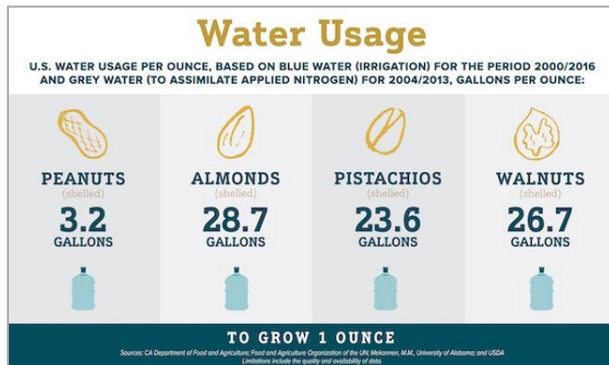
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Current ES	2,032	1,935	2,277	2,443	2,504	2,491	2,455	2,425	2,388	2,359	2,319	2,262
Less 150	1,882	1,785	2,127	2,293	2,354	2,341	2,305	2,275	2,238	2,209	2,169	2,112
Less 200	1,832	1,735	2,077	2,243	2,304	2,291	2,255	2,225	2,188	2,159	2,119	2,062
	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34
STUR	34%	32%	36%	38%	39%	38%	38%	37%	37%	36%	35%	34%
STUR-150	31%	29%	33%	35%	35%	35%	35%	34%	34%	33%	32%	31%
STUR-200	30%	28%	32%	34%	34%	34%	34%	33%	33%	32%	31%	30%

Sustainability of U.S. Agriculture

Campaigns from peanut, rice, soybean, and cotton sectors touting the metrics



Source: NPB, USA Rice Federation, U.S. Soy, NCC.



*Thank you for the opportunity to attend the
Southern Peanut Growers Conference!*



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