Fertilizer Market Trends and Management Decisions for 2026

College of Agricultural, Consumer & Environmental Sciences
UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN

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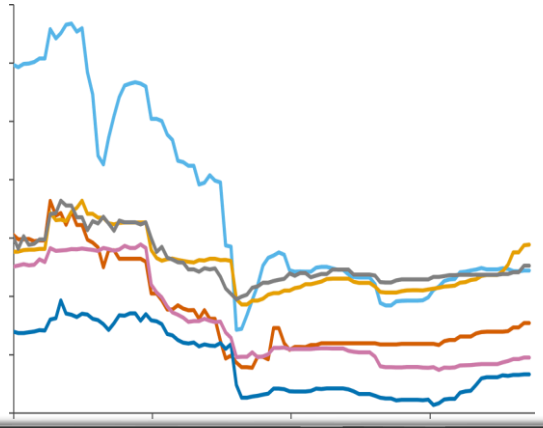
Topic Outline

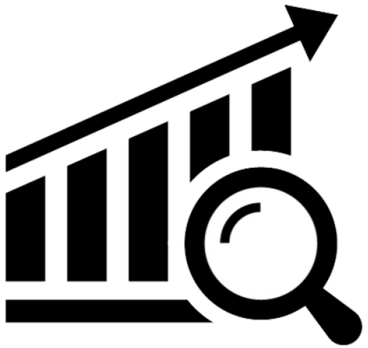
Survey Overview

Fertilizer Prices & Costs



N Rates and Timing

Industry Trends



Survey Overview

Farmer Survey

- Interested in:
  - How farmers make fertilizer decisions
  - Experience with local market for fertilizers
  - Views on industry trends s
    uch as consolidation in inputs
- Online survey conducted in Fall 2024
  - *farmdoc* email list
  - Help from sponsors and partners to distribute

Research project supported by the

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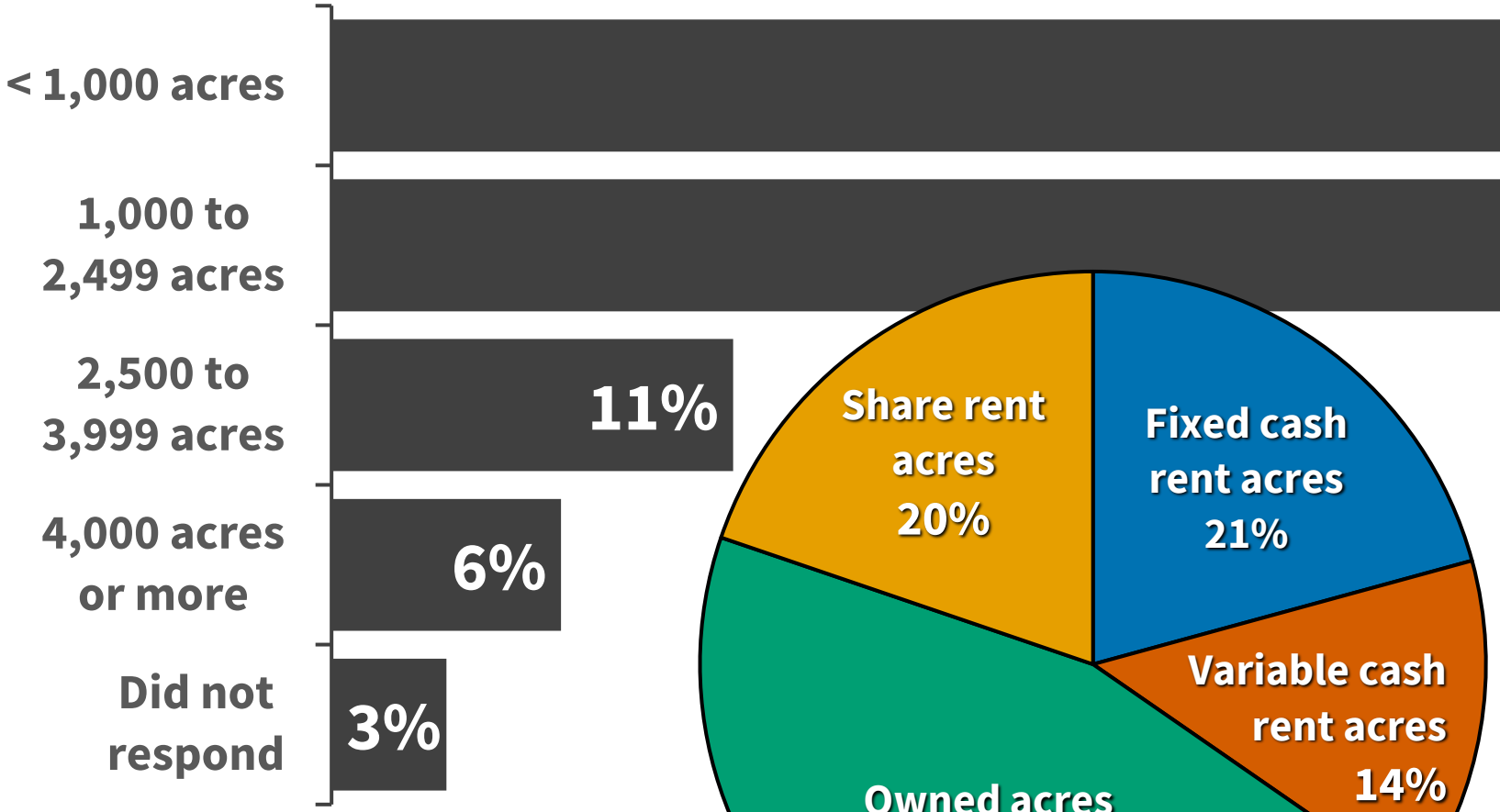
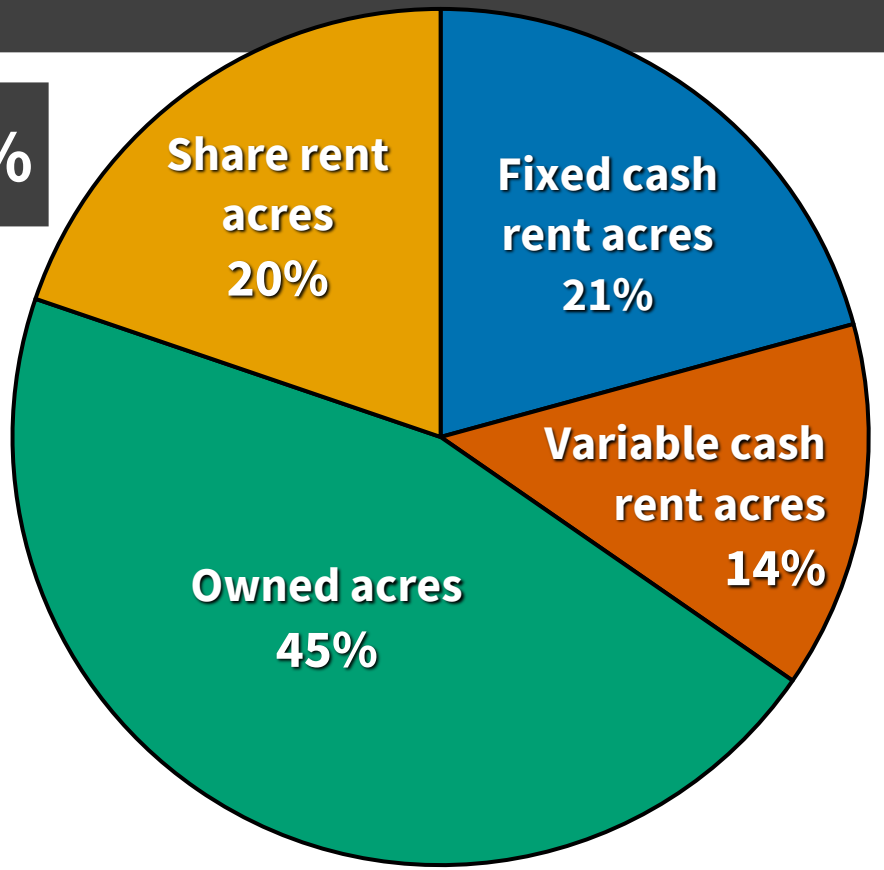
Demographics





262 responses from crop farmers from 25 states

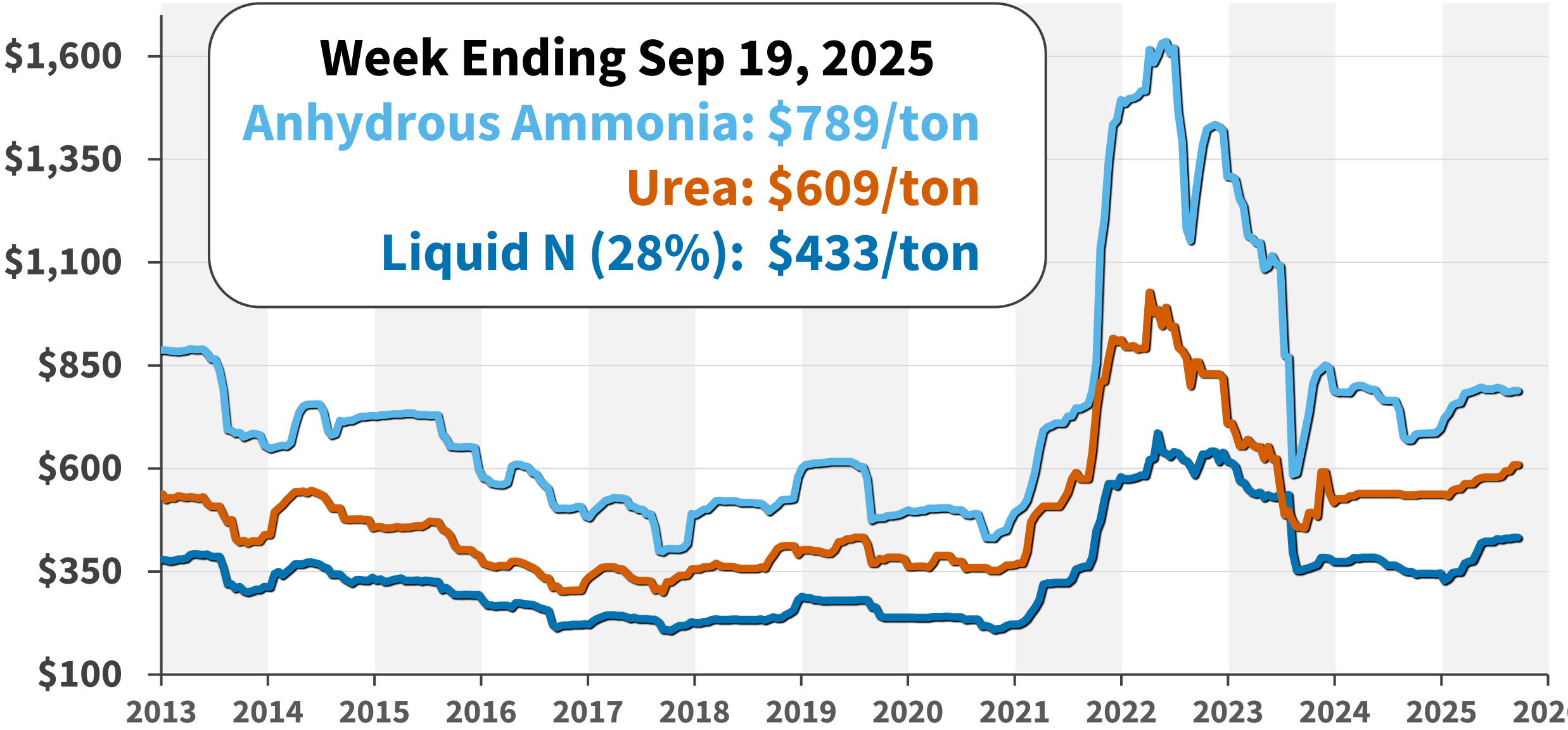
- 44% from Illinois
  65% from Midwest
- 76% grow corn
  78% grow soybeans
  42% have livestock

Fertilizer Prices and Costs

How will your fertilizer costs in 2026 compare with 2025?

- ○ Lower
- ○ About the same
- ○ Higher
- ○ Haven’t thought about or looked into it yet

Illinois Fertilizer Costs – Nitrogen



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Source: USDA AMS Livestock, Poultry & Grain Market News

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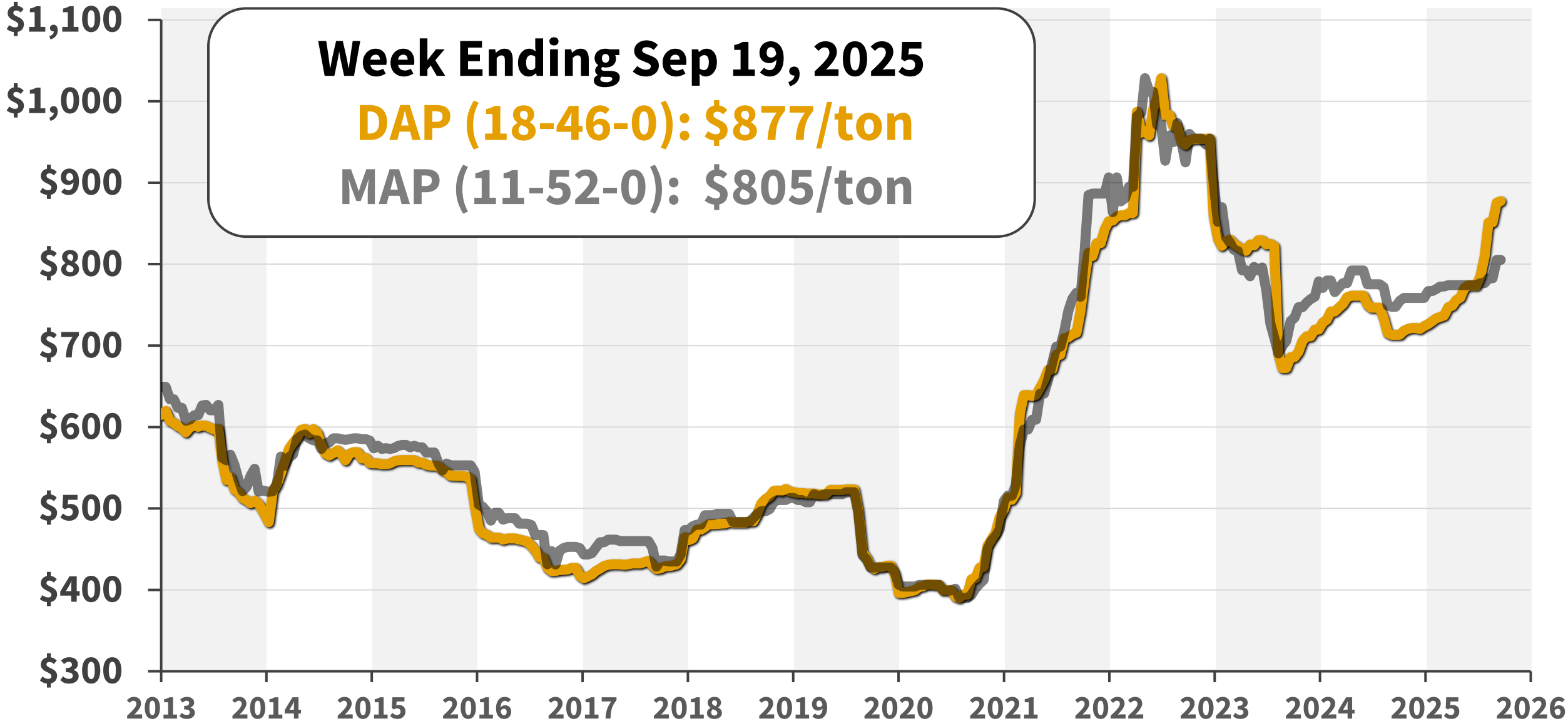
Illinois Fertilizer Costs – DAP and MAP



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Source: USDA AMS Livestock, Poultry & Grain Market News

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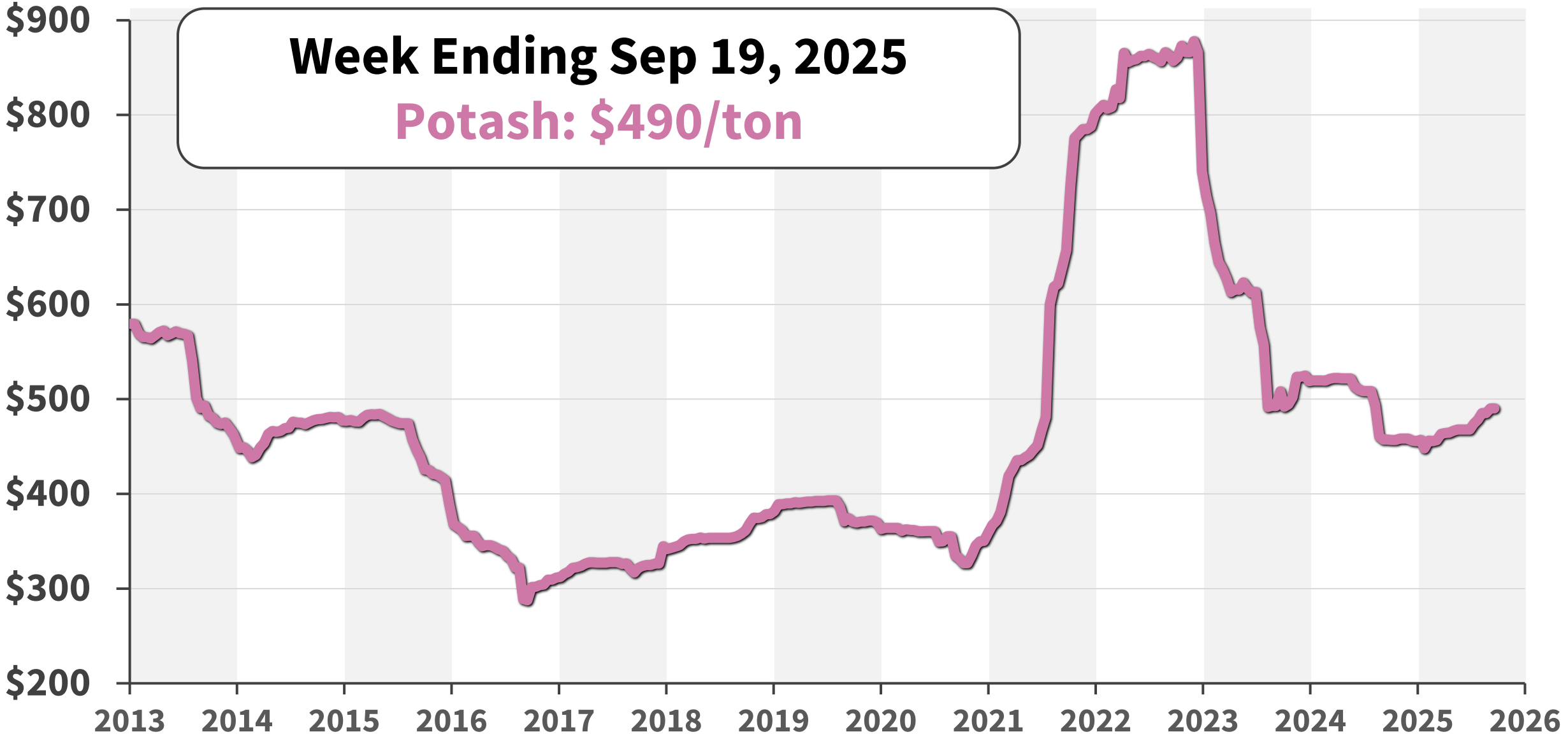
Illinois Fertilizer Costs – Potash



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Source: USDA AMS Livestock, Poultry & Grain Market News

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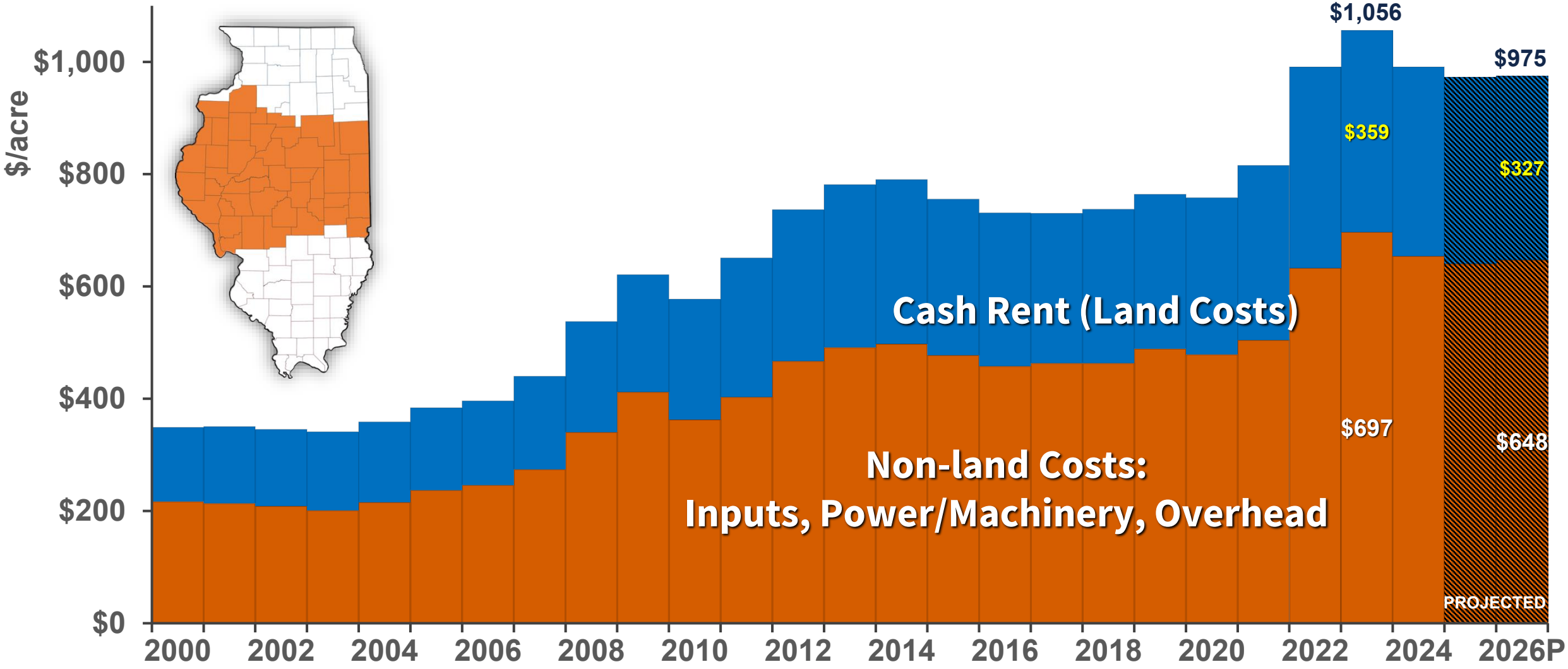
Production Costs for Central Illinois in $ per acre

50-50 Corn-Soy Rotation, 2000 to 2026P



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Source: Illinois Farm Business Farm Management and *farmdoc* projections

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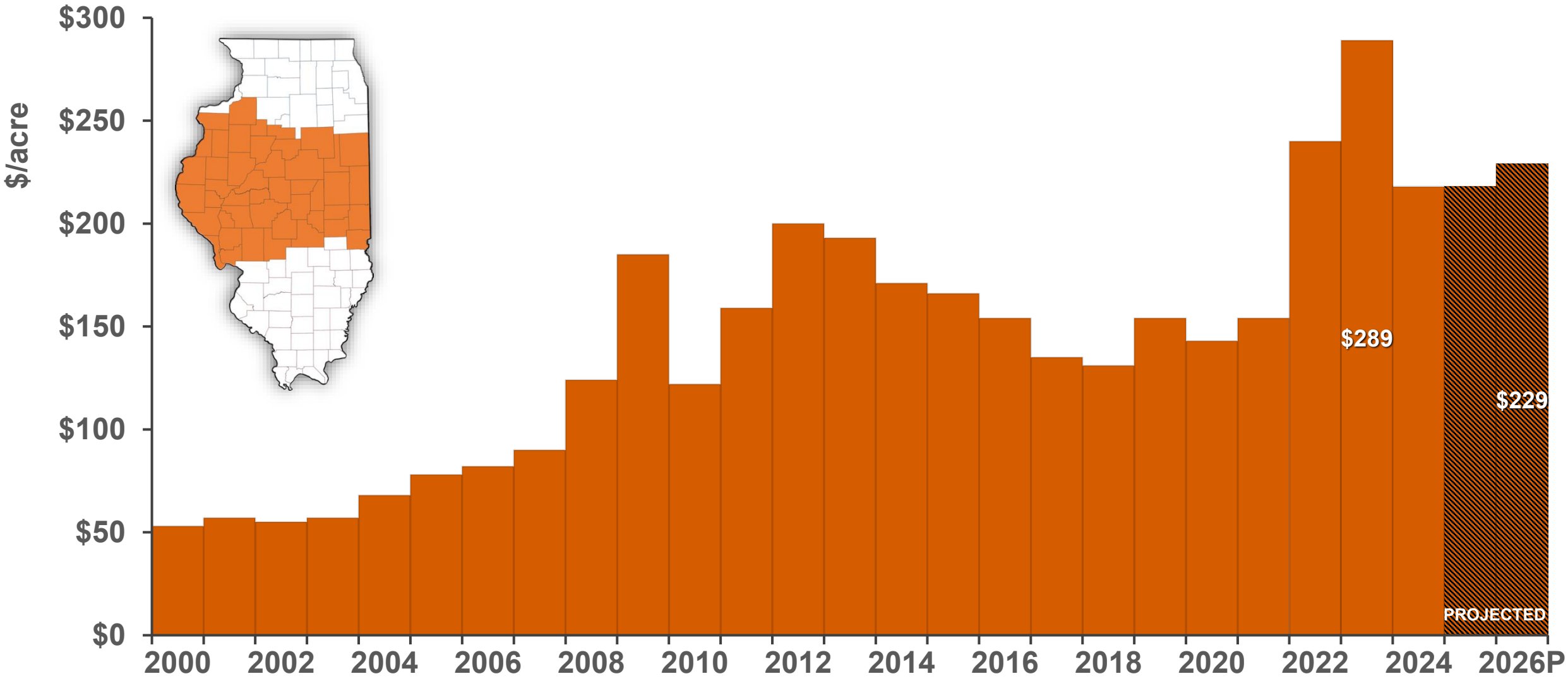
Fertilizer Costs for Corn in $ per acre

Central Illinois, 2000 to 2026P



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Source: Illinois Farm Business Farm Management and *farmdoc* projections

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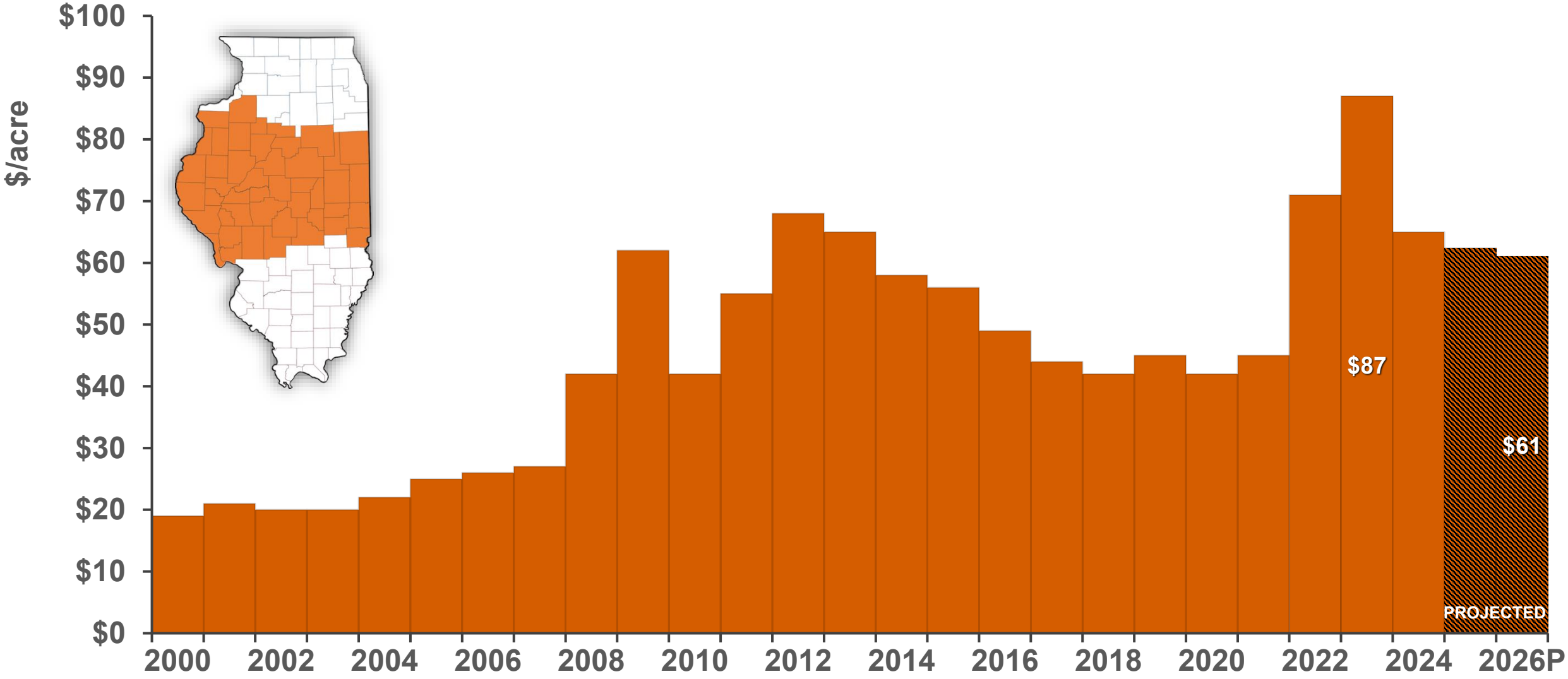
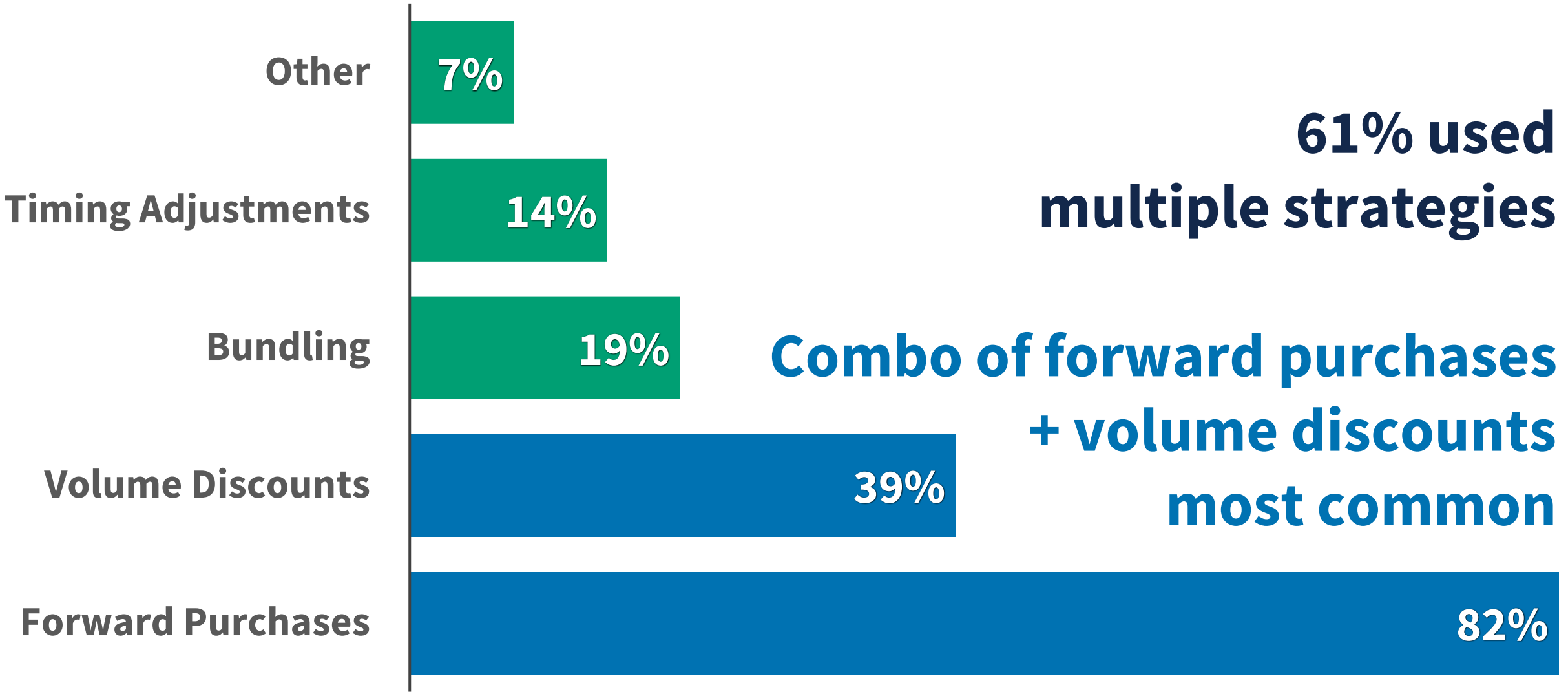
Fertilizer Costs for Soybeans in $ per acre

Central Illinois, 2000 to 2026P



Source: Illinois Farm Business Farm Management and *farmdoc* projections

Strategies Used for Fertilizer Pricing



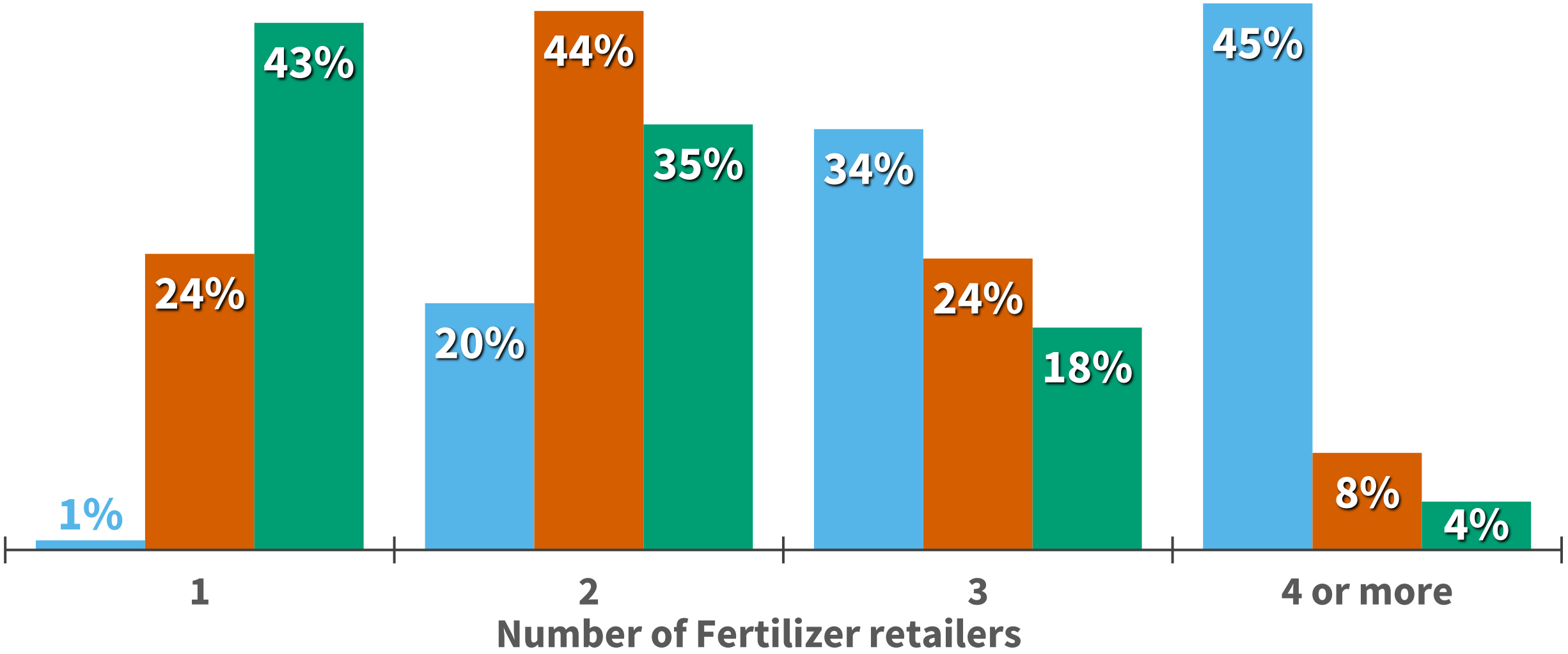
61% used multiple strategies

Combo of forward purchases + volume discounts most common

Source: *farmdoc* survey of farmers, 2024

How many retailers do farmers work with?

Aware of in area, solicit quotes from, purchase from



Source: *farmdoc* survey of farmers, 2024

Farmers who Agree/Strongly Agree vs Disagree/Strongly Disagree

Doing business with only one retailer results in

More retailers would

Source: *farmdoc* survey of farmers, 2024

Takeaways

- Fertilizer prices have come down from 2022 peaks but remain high relative to crop prices
- Forward purchases and volume discounts are most common pricing strategies based on survey
  - Importance of getting quotes from multiple retailers even if you tend to do most/all business with a single preferred

Application Rate and Timing Decisions

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What information do you use to determine your N application rate? (check all that apply)

- ❑ University Extension (i.e. MRTN)
- ❑ Soil test
- ❑ Retailer recommendations
- ❑ Independent advisor/agronomist
- ❑ Fertilizer and Corn prices

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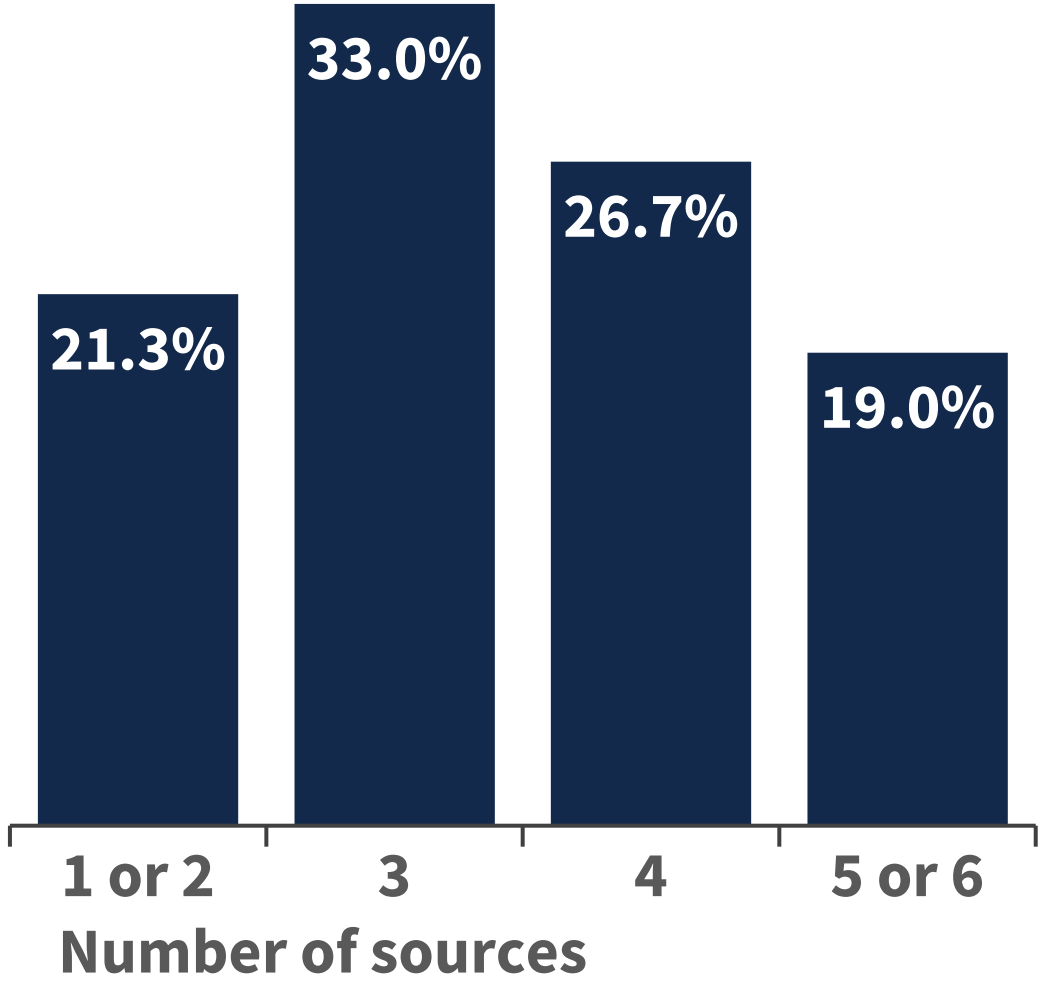
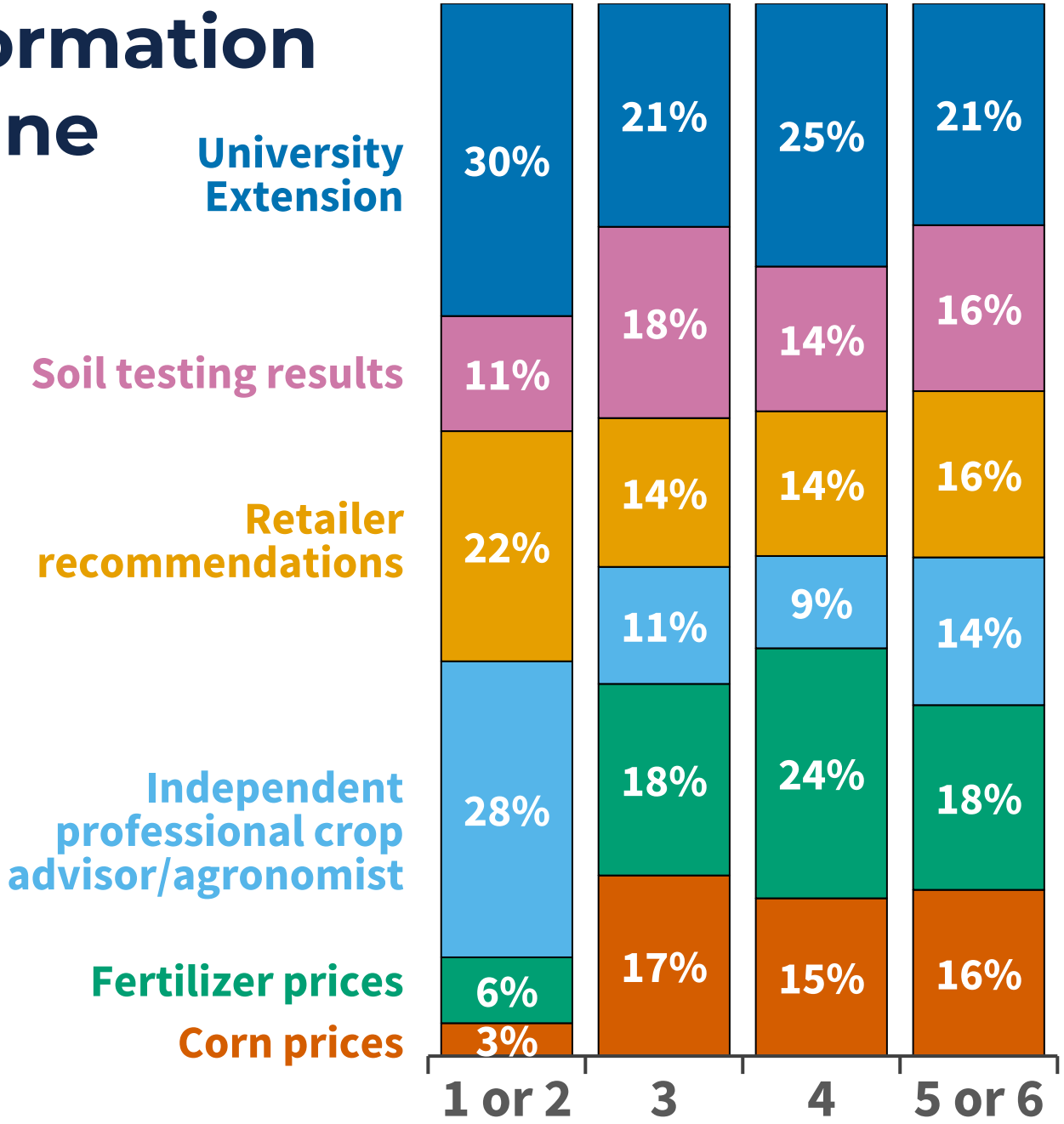
Number and type of information sources used to determine N application rates





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Source: *farmdoc* survey of farmers, 2024

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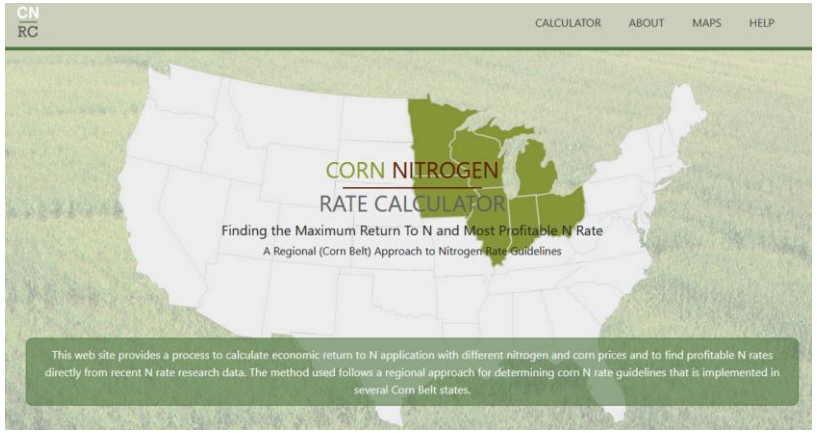
Application Rate Decisions

- Consider the MRTN for your region
  - MRTN rates for central IL at $4.00 corn
    - 180 lbs/acre at $790/ton anhydrous
    - 199 lbs/acre at $500/ton anhydrous



MRTN Calculator

- Consider N credit from DAP/MAP applications
  - Survey suggests most farmers do (83%)

- Consider P and K soil test and required maintenance levels

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Managing Soil pH and Crop Nutrients

Illinois Agronomy Handbook

P and K rate (Illinois)

- New phosphorus and potassium removal rates
  - .37 lbs. of P_2O_5 per bushel of corn
  - .75 lbs. of P_2O_5 per bushel of soybeans
  - .24 lbs. of K_2O per bushel of corn
  - 1.17 lbs. of K_2O per bushel of soybeans

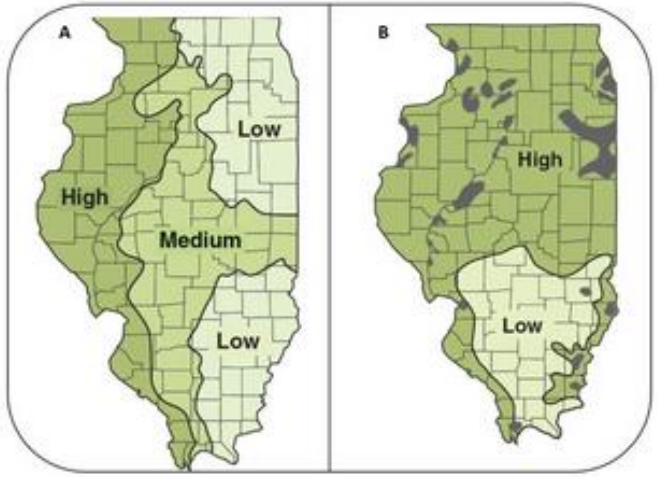


Figure 2A: Subsoil phosphorus-supplying power. Figure 2B: Cation exchange capacity (CEC) of Illinois soils. Source: Illinois Agronomy Handbook.

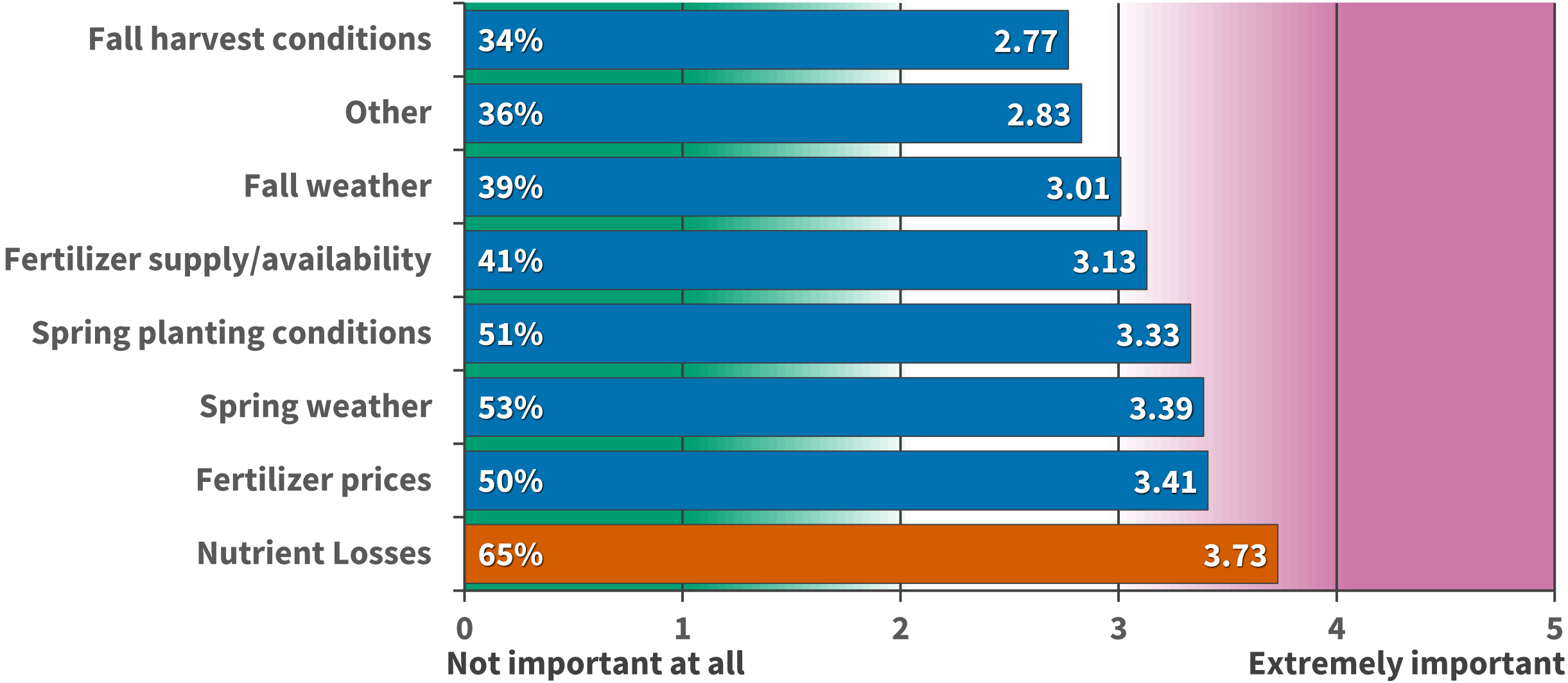
- Soil test levels
  - No yield advantage when Bray P_1 is above 60, 65, and 70 in soils with high, medium, and low supplying capacity
  - No yield advantage with soil test levels above 360 and 400 lbs/acre of K for low and high CEC areas

Source: Giovani Preza Fontes, Fertilizing with High Prices of P and K, The Bulletin, October 21, 2022

Factors impacting N timing decisions

1= not important at all; 5 = extremely important

% indicates proportion of respondents rating this is important or extremely important



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Source: *farmdoc* survey of farmers, 2024

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Application Timing Decisions

- Fall application provides flexibility
  but also associated with greatest potential for N loss

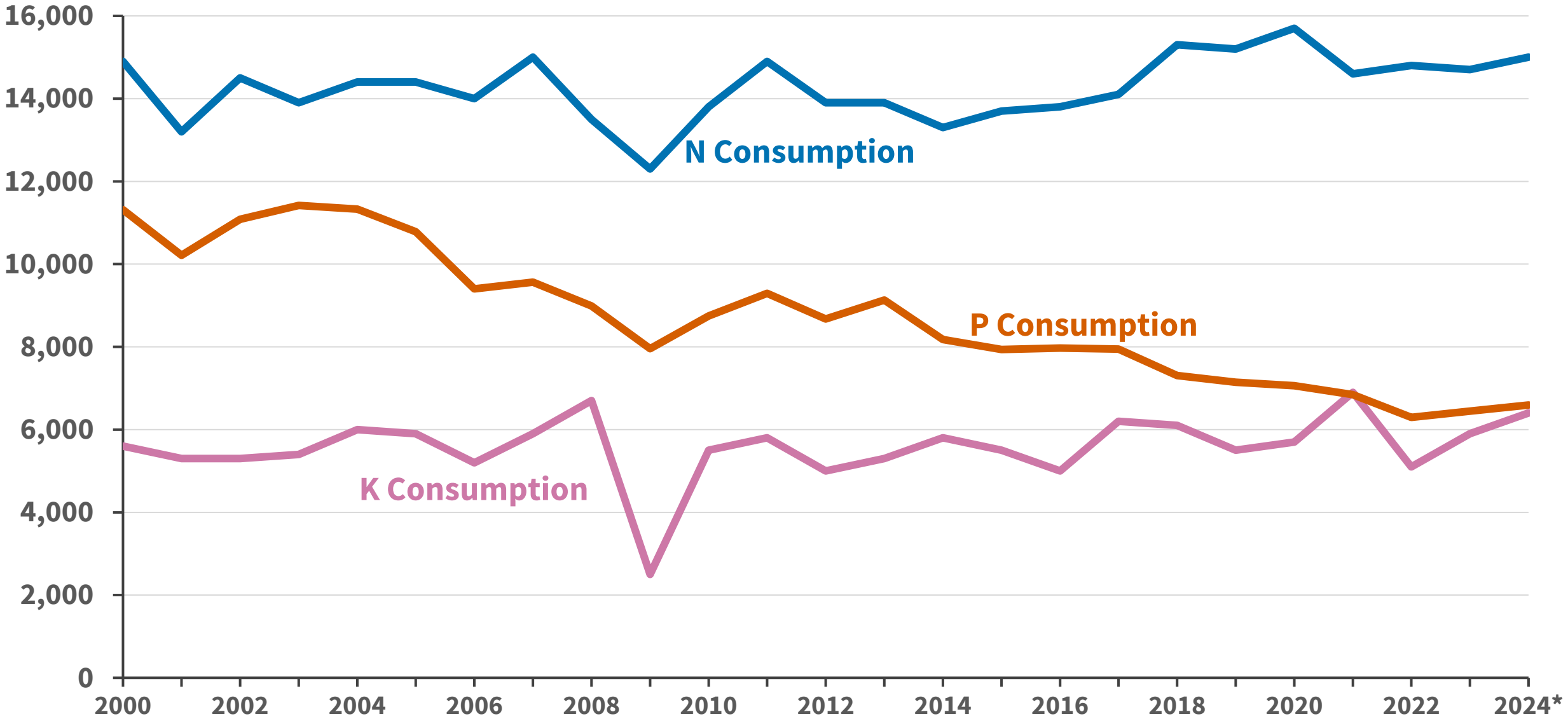
- Spring applications can reduce nutrient losses

Industry Trends

Industry Trends: Supply and Use

U.S. Consumption and Production of N, P and K, 2000-2024*

Note: Measured in nutrient equivalent metric tons



Source: USGS (2025)

U.S. Consumption and Production of N, P and K, 2000-2024*

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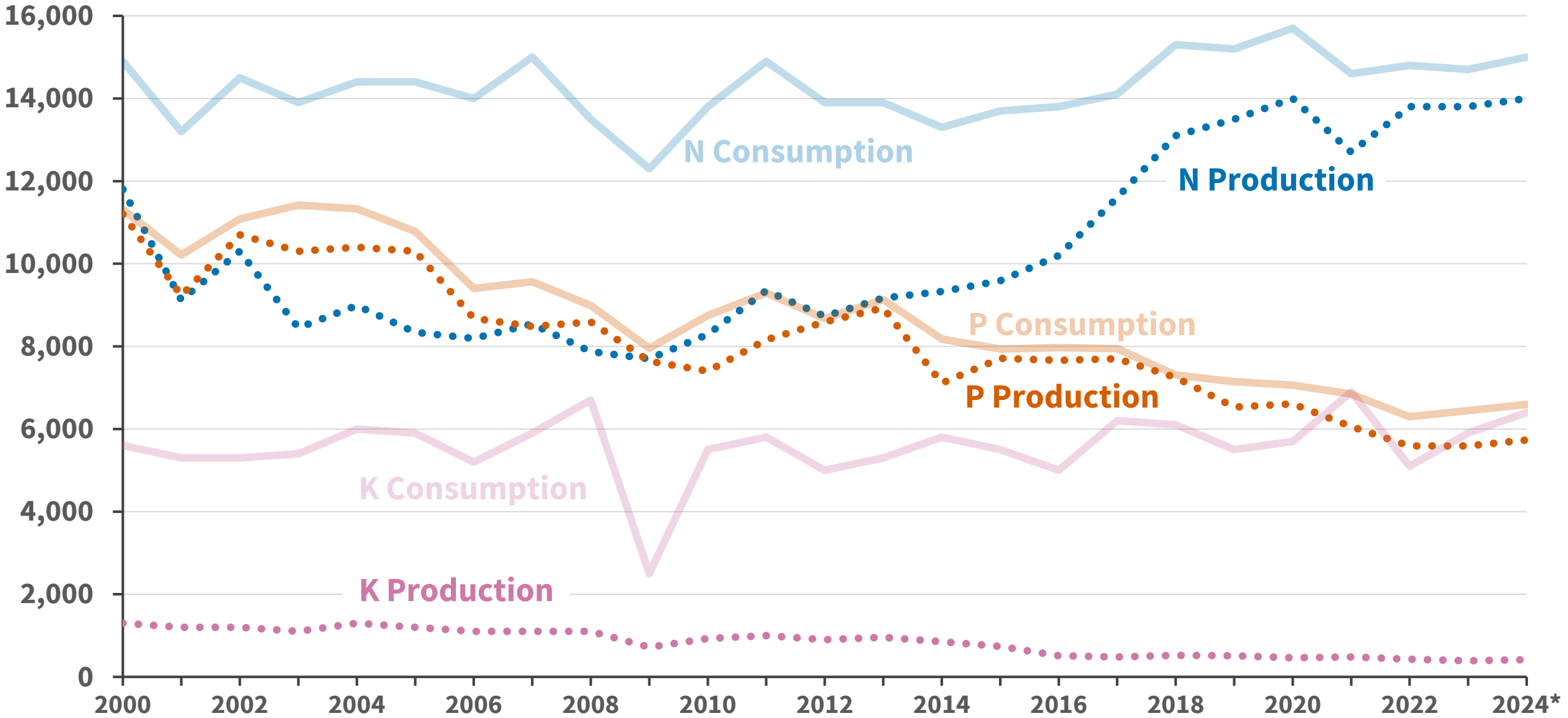
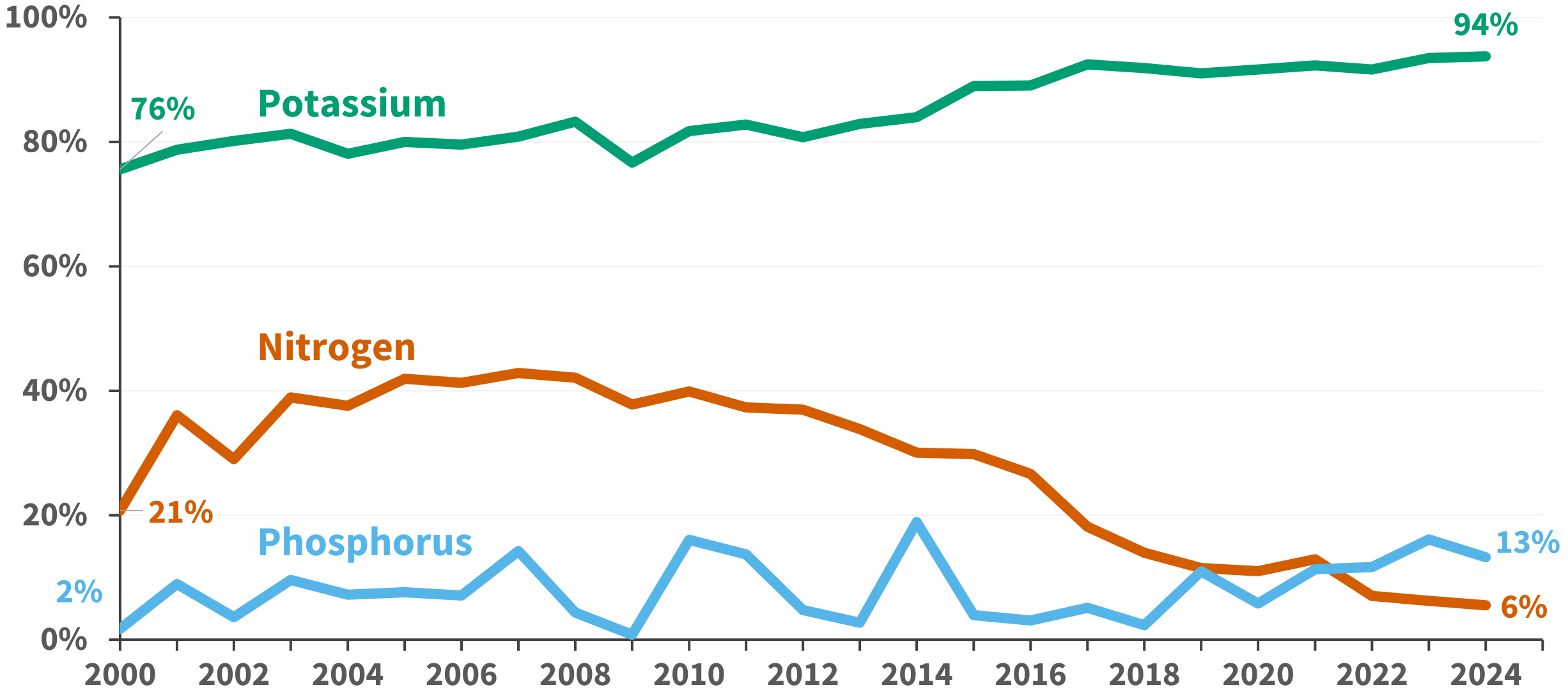


Source: USGS (2025)

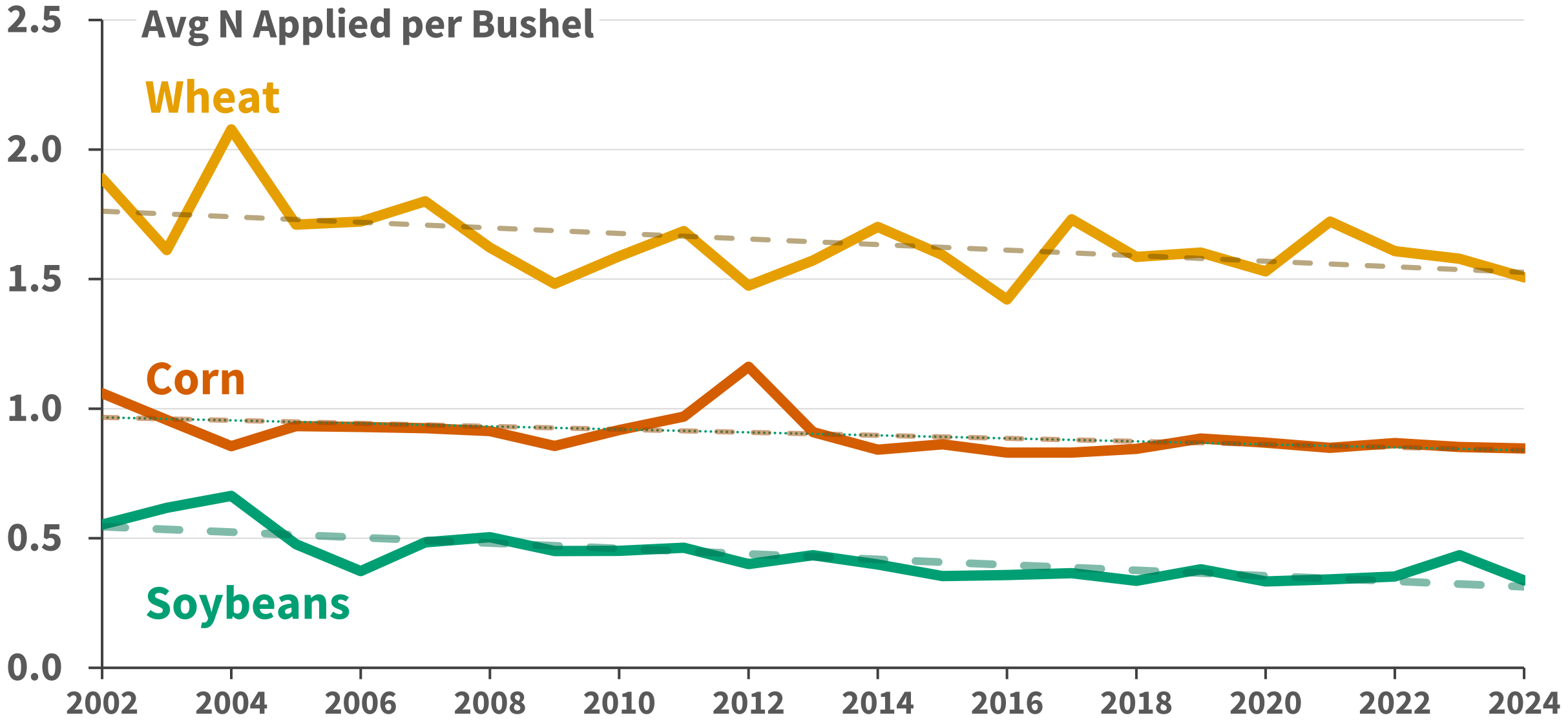
U.S. Fertilizer Net Import Reliance, 2000-2024*

Net import reliance = imports – exports ± stock adjustments
Reported as % of consumption



Source: USGS (2025)

Estimated Fertilizer Use Efficiency (lbs/bushel) for Nitrogen by Crop, 2002-2024



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Source: National Agriculture Statistics Service (NASS), USDA; *farmdoc* estimates

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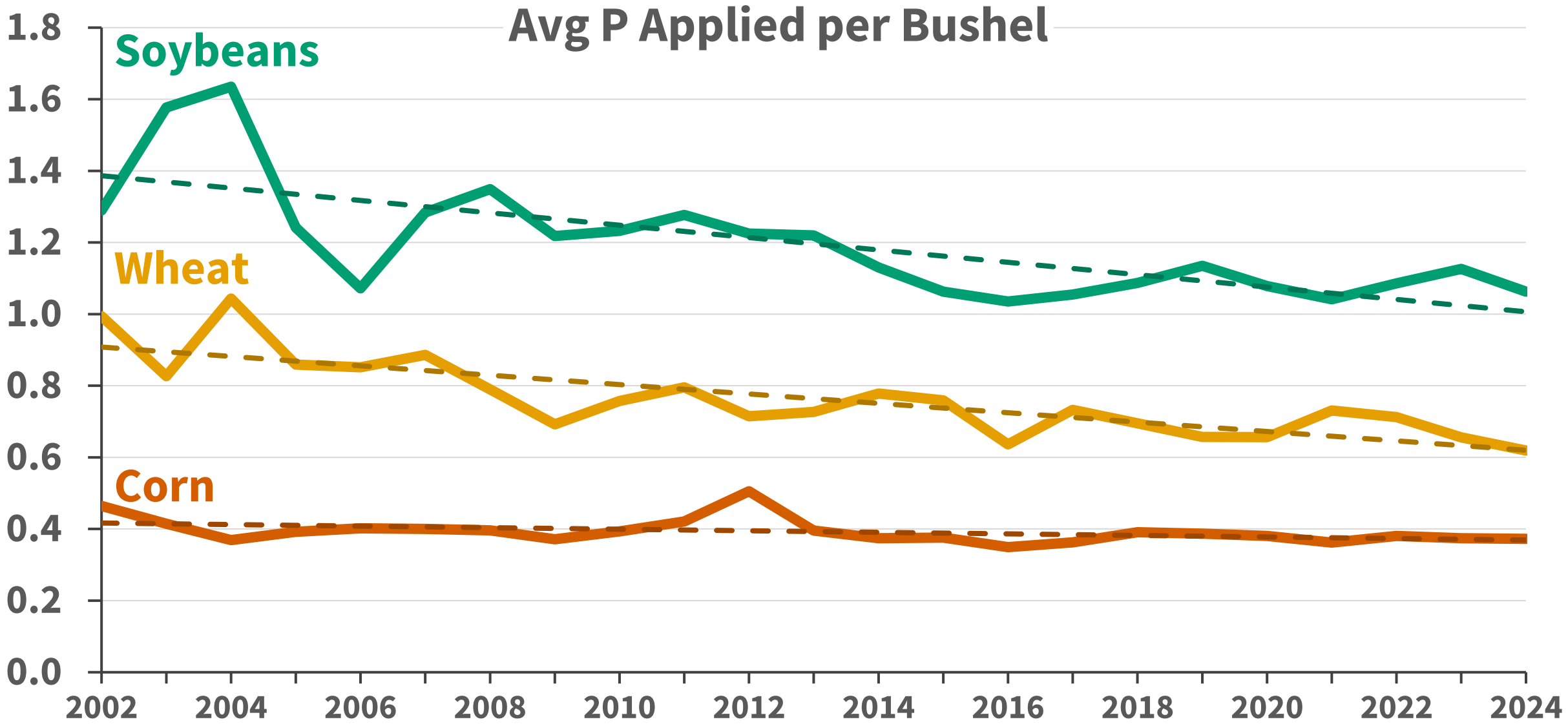
Estimated Fertilizer Use Efficiency (lbs/bushel) for Phosphorus by Crop, 2002-2024



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Source: National Agriculture Statistics Service (NASS), USDA; *farmdoc* estimates

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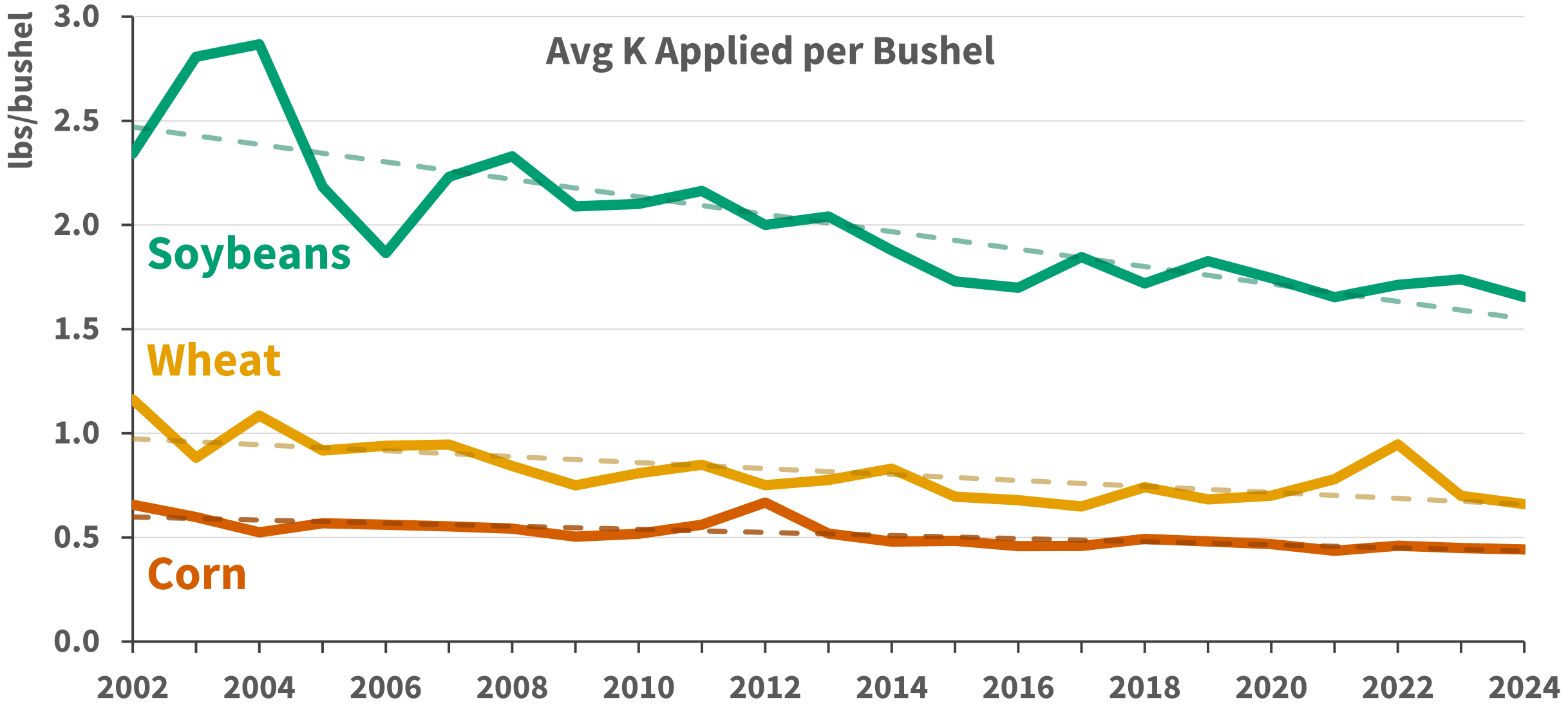
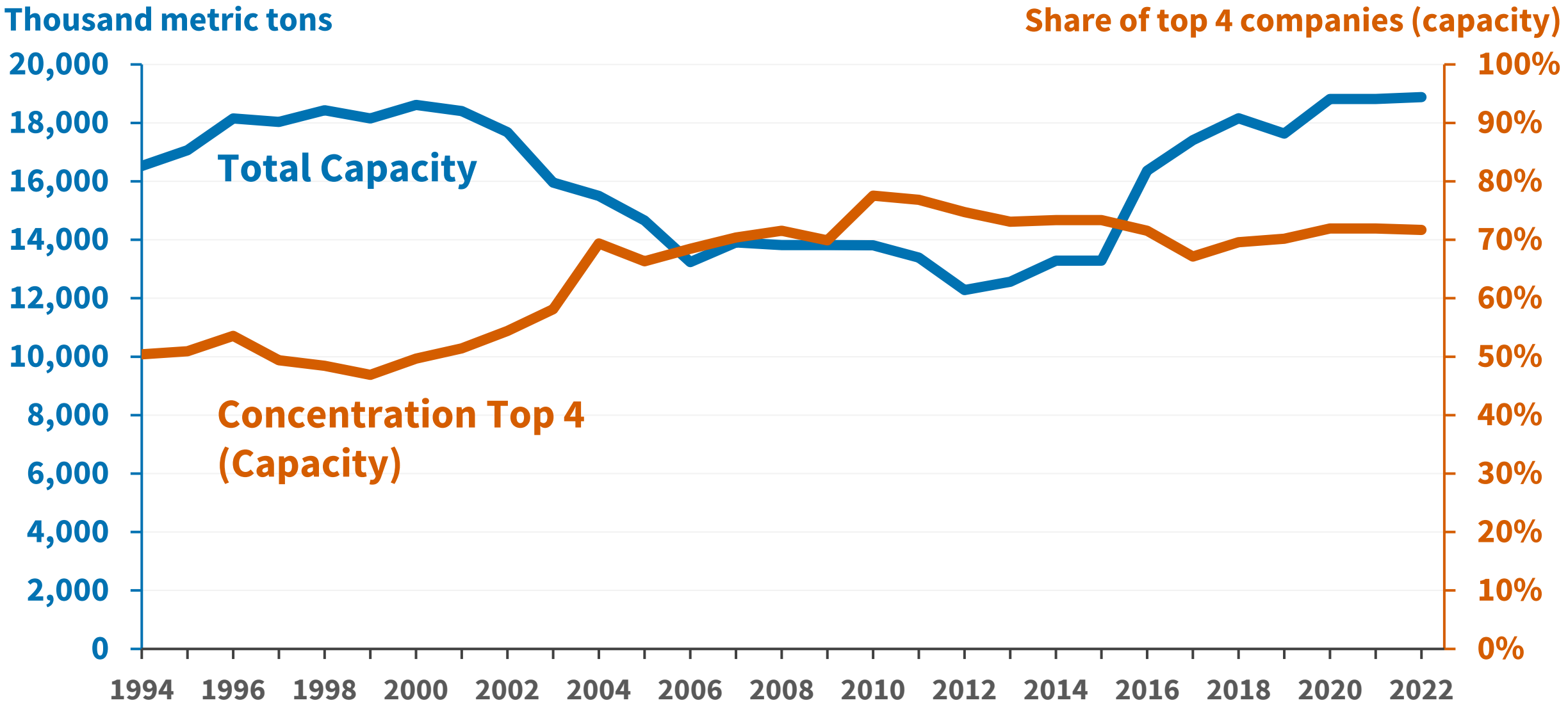
Estimated Fertilizer Use Efficiency (lbs/bushel) for Potassium by Crop, 2002-2024



Source: National Agriculture Statistics Service (NASS), USDA; *farmdoc* estimates

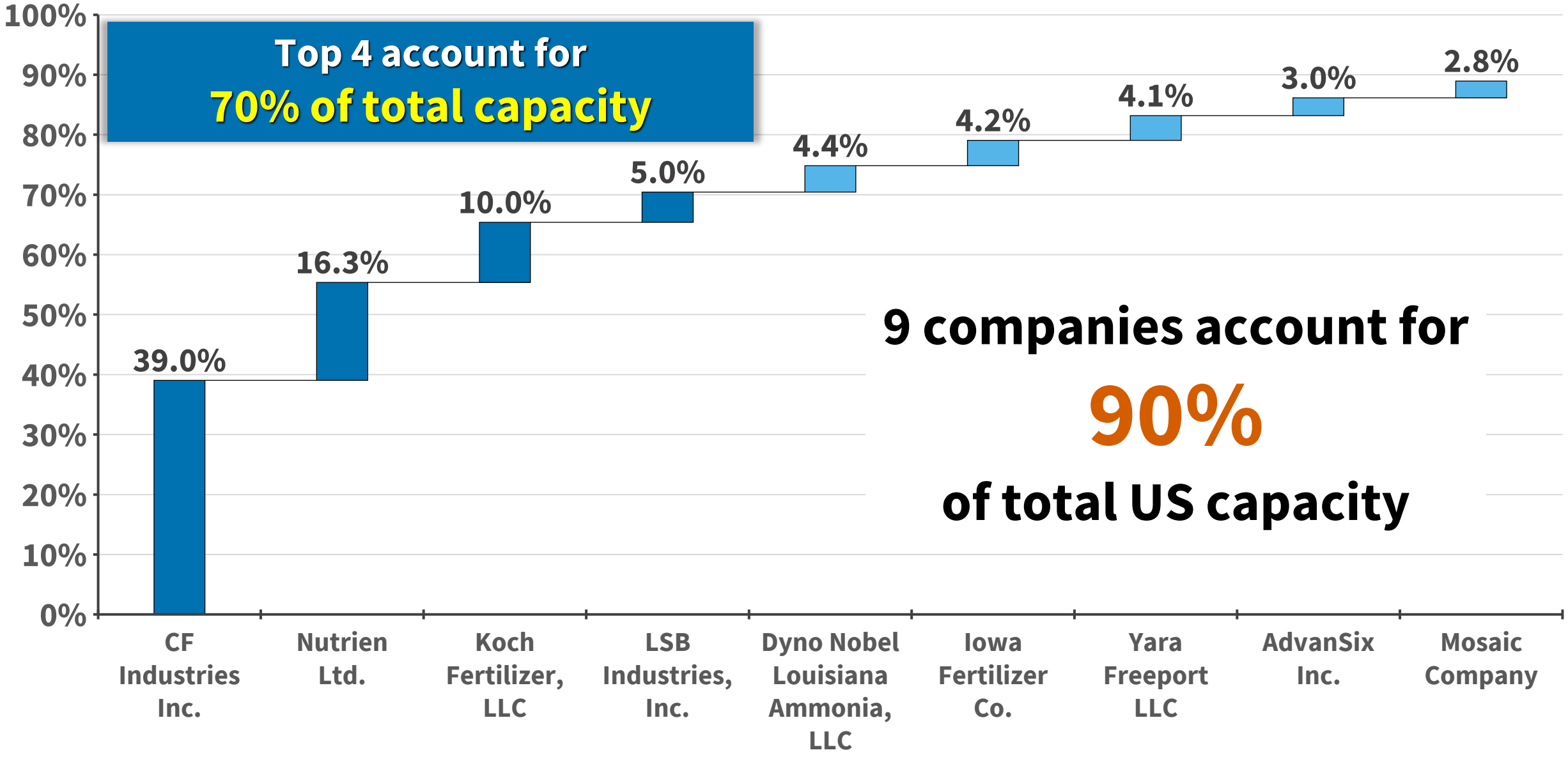
Industry Trends: Consolidation

Capacity and Consolidation in U.S. Anhydrous Ammonia Production



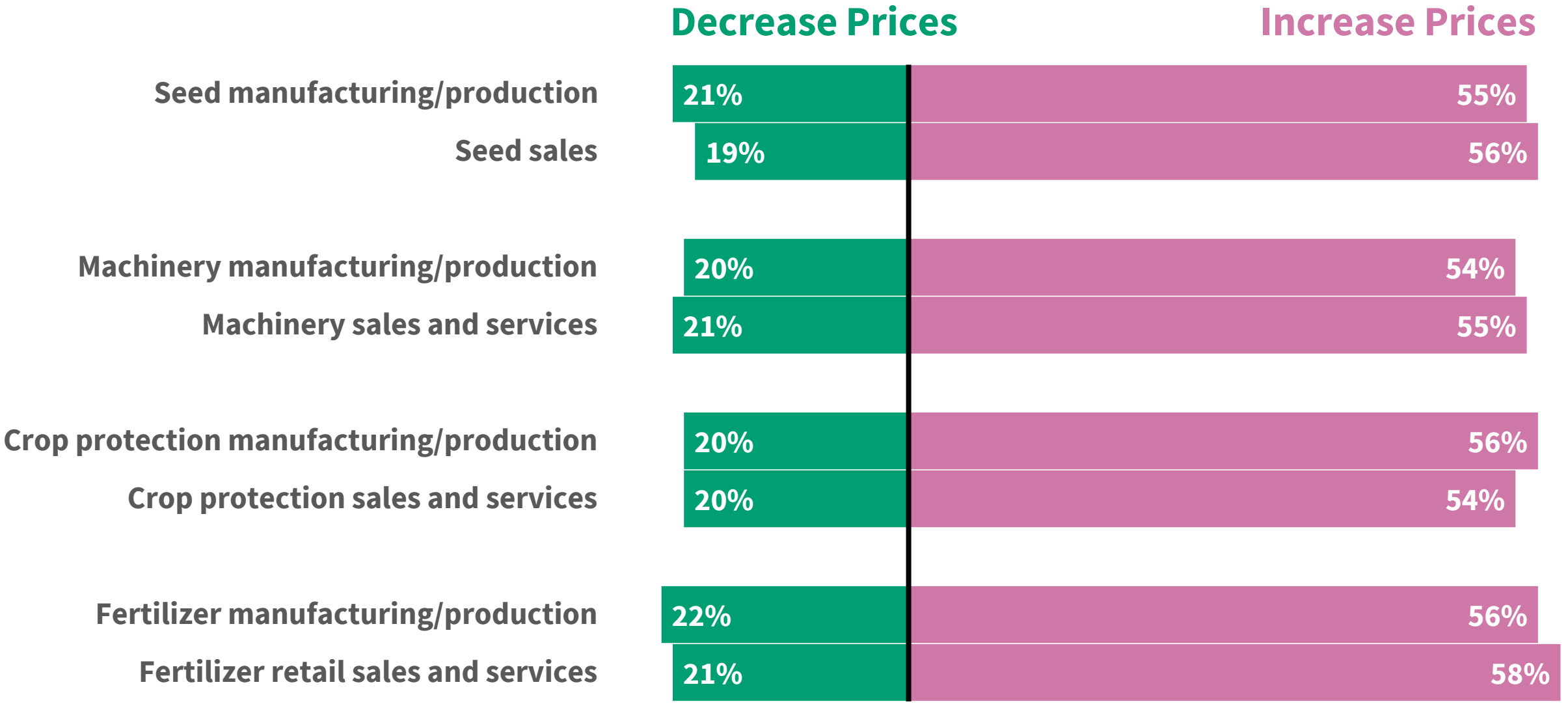
Source: USGS (2025)

Concentration in U.S. Anhydrous Ammonia Production



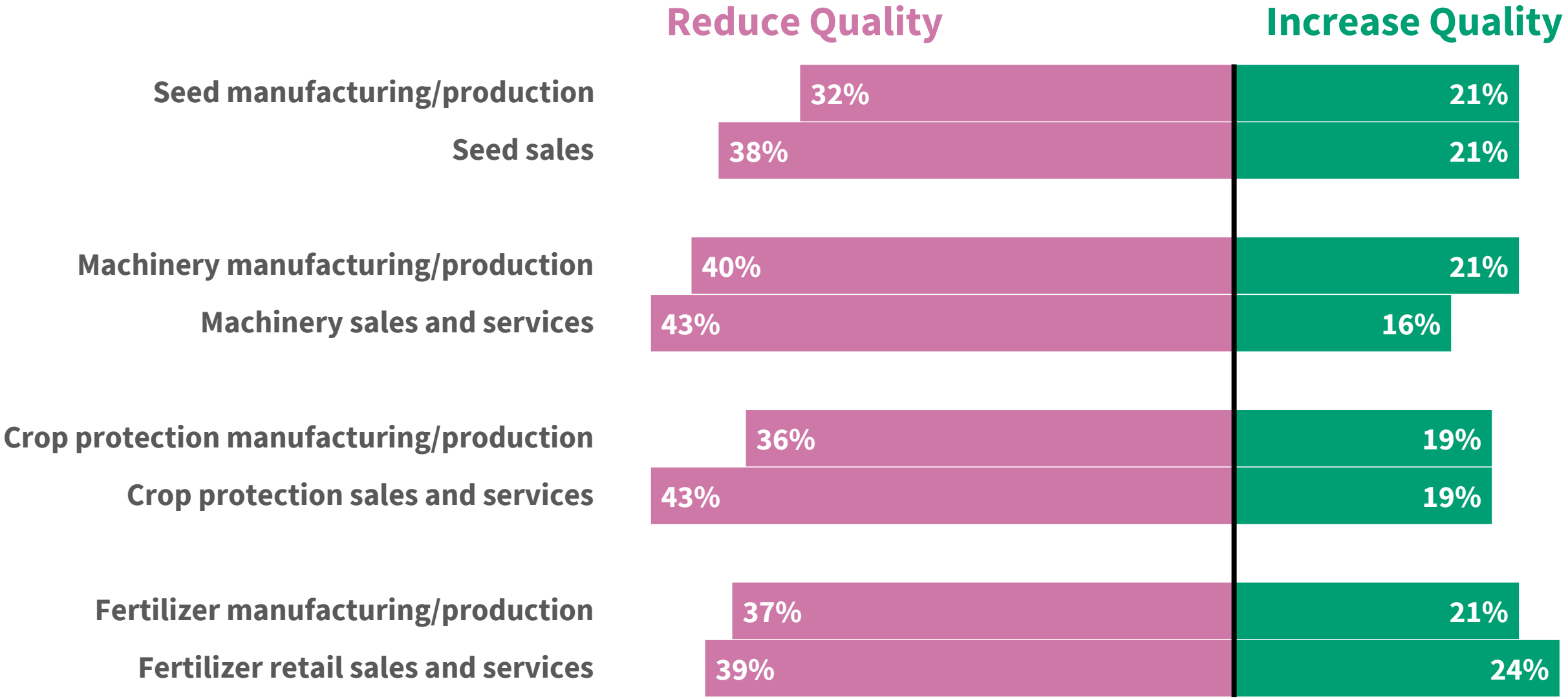
Source: USGS (2025)

Consolidation impact on: prices for products and services



Source: *farmdoc* survey of farmers, 2024

Consolidation impact on: quality of customer service received



Source: *farmdoc* survey of farmers, 2024

Summary

- Fertilizer prices remain high, contributing to poor return prospects
  - Reconsider N rates based on MRTN which accounts for current crop and fertilizer prices and yield response to N (maximize profit, not yield)
  - P and K replacement rates and soil testing
  - Timing shifts can reduce nutrient losses, but flexibility and cost also considerations
- Global fertilizer use continues to grow, stable (N, K) or declining (P) in US
  - Import reliance in US greatest for K; smaller but still important for P and N
  - Efficiency of use in US continues to improve (more bushels per lb of N/P/K)
- Consolidation in fertilizers, and other inputs, a concern

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