

Farm Management Issues 2023

2022 Row Crop Short Course
December 7, 2022

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Outline

- Mississippi Crop Production in 2022
- Cost of Production Estimates for 2023
- Fertilizer Situation



Mississippi Acreage

Table 1. Change in Crop Acreage from 2021 to 2022

Crop	2021 Acres	2022 Acres	Change
Corn	710,811	570,293	-140,518
Upland Cotton	439,963	526,137	86,174
Long Grain Rice	101,194	84,600	-16,594
Soybeans	2,203,031	2,288,616	85,585
Wheat	71,479	79,092	7,613



Mississippi Land Values

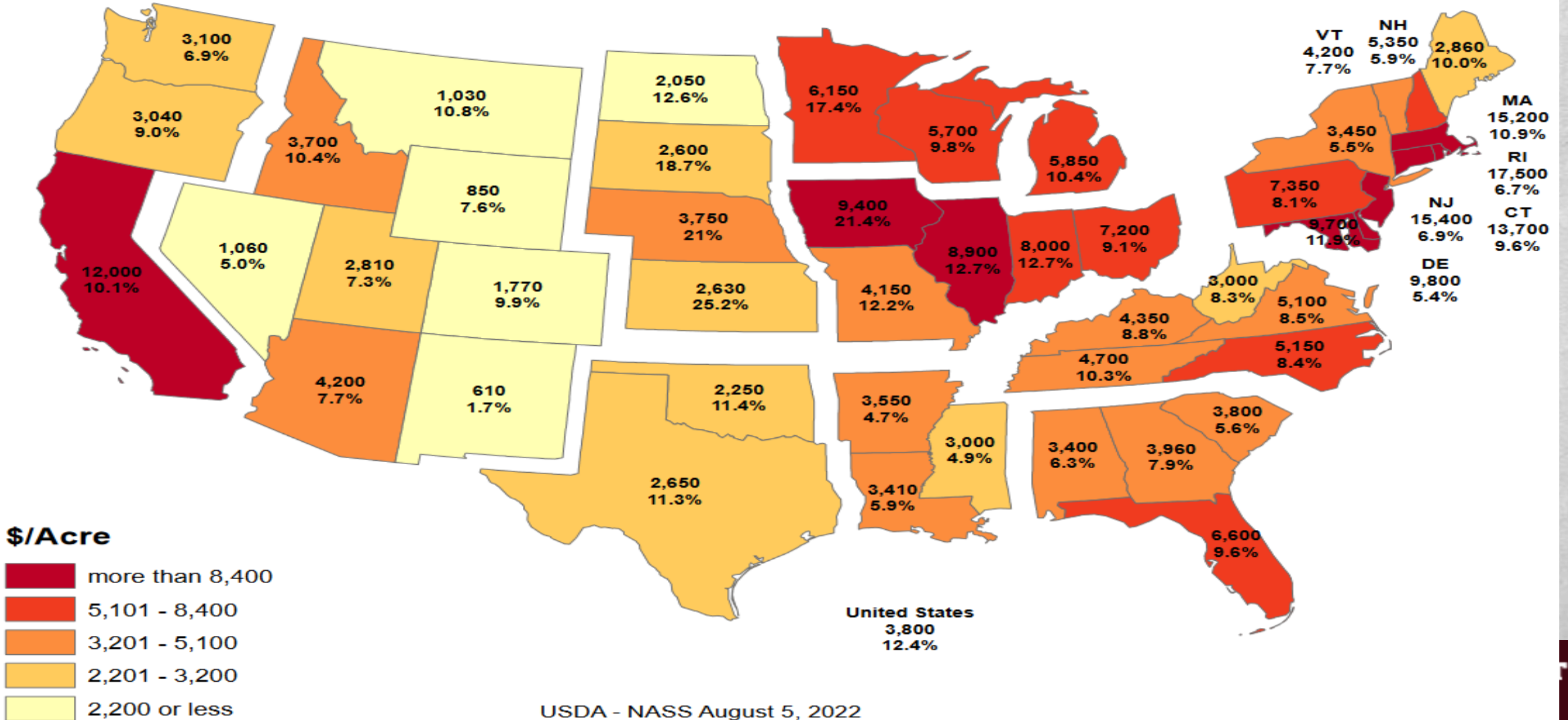
- USDA NASS reported average land value for Mississippi of \$3,000/ac for 2022
- Increase of 4.9% compared to 2020
- U.S. average of \$3,800/ac and 12.4% increase from 2021



Land Values

2022 Farm Real Estate Value by State

Dollars per Acre and Percent Change from 2021



USDA - NASS August 5, 2022

Mississippi Cash Rent

Table 2. Average Cash Rent per Acre for Delta and Non-Delta Regions for 2022

Region	Irrigated	Non-Irrigated
Delta	\$158.67	\$118.75
Non-Delta	\$153.00	\$52.98



MSU Cost of Production Estimates – 2023 Crop Year

- MSU produces yearly Enterprise and Planning budgets using MSU Budget Generator
- Survey Mississippi companies to determine costs of herbicide, pesticide, fertilizer, equipment, etc
- Multidisciplinary team develops budgets based on common production practices/recommendations



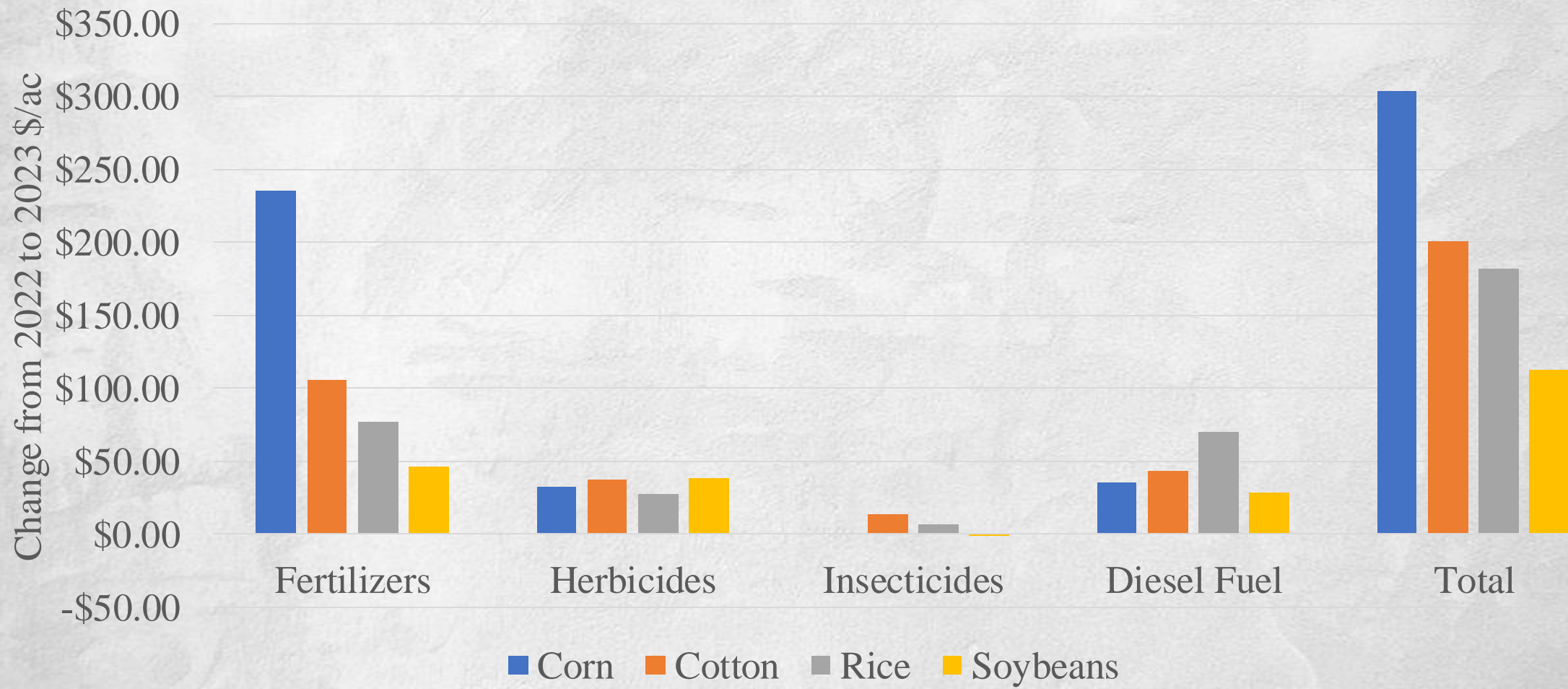
MSU Cost of Production Estimates Changes from Previous Year

- Input costs were up significantly from previous year
 - Partially due to when surveys are done
- Costs will vary for each producer
- Available at agecon.msstate.edu



Input Costs

Input Cost Changes from 2022 to 2023



Corn Input Costs

Table 3. Corn Budgets 2023 vs 2022

Item	2023	2022	Change
Yield bu/ac	220	220	
Total Direct Expenses	\$998.97	\$681.53	\$317.44
Total Fixed Expenses	\$129.19	\$103.08	\$26.11
Total Expenses	\$1,128.16	\$784.61	\$343.55
Returns above Total Expenses	\$224.84	\$352.79	-\$127.95
Break-Even Price	\$5.13	\$3.57	\$1.56



Cotton Input Costs

Table 4. Cotton Budgets 2023 vs 2022

Item	2023	2022	Change
Lint Yield lbs/ac	1500	1500	
Total Direct Expenses	\$1,091.62	\$874.33	\$217.29
Total Fixed Expenses	\$232.00	\$179.17	\$52.83
Total Expenses	\$1,323.62	\$1,053.50	\$270.12
Returns above Total Expenses	\$9.13	\$638.50	-\$629.37
Break-Even Price	\$0.88	\$0.70	\$0.18



Rice Input Costs

Table 5. Rice Budgets 2023 vs 2022

Item	2023	2022	Change
Rice Yield lbs/ac	167	167	
Total Direct Expenses	\$1,035.30	\$830.26	\$205.04
Total Fixed Expenses	\$163.94	\$129.32	\$34.62
Total Expenses	\$1,199.24	\$959.58	\$239.66
Returns above Total Expenses	-\$70.64	\$10.18	-\$80.82
Break-Even Price	\$7.17	\$5.75	\$1.20



Soybean Input Costs

Table 6. Soybean Budgets 2023 vs 2022

Item	2023	2022	Change
Lint Yield lbs/ac	60	60	
Total Direct Expenses	\$631.98	\$448.12	\$183.86
Total Fixed Expenses	\$126.88	\$99.74	\$27.14
Total Expenses	\$758.86	\$547.86	\$211.00
Returns above Total Expenses	\$60.74	\$199.74	-\$139.00
Break-Even Price	\$12.65	\$9.13	\$3.52



Fertilizer Situation and Outlook



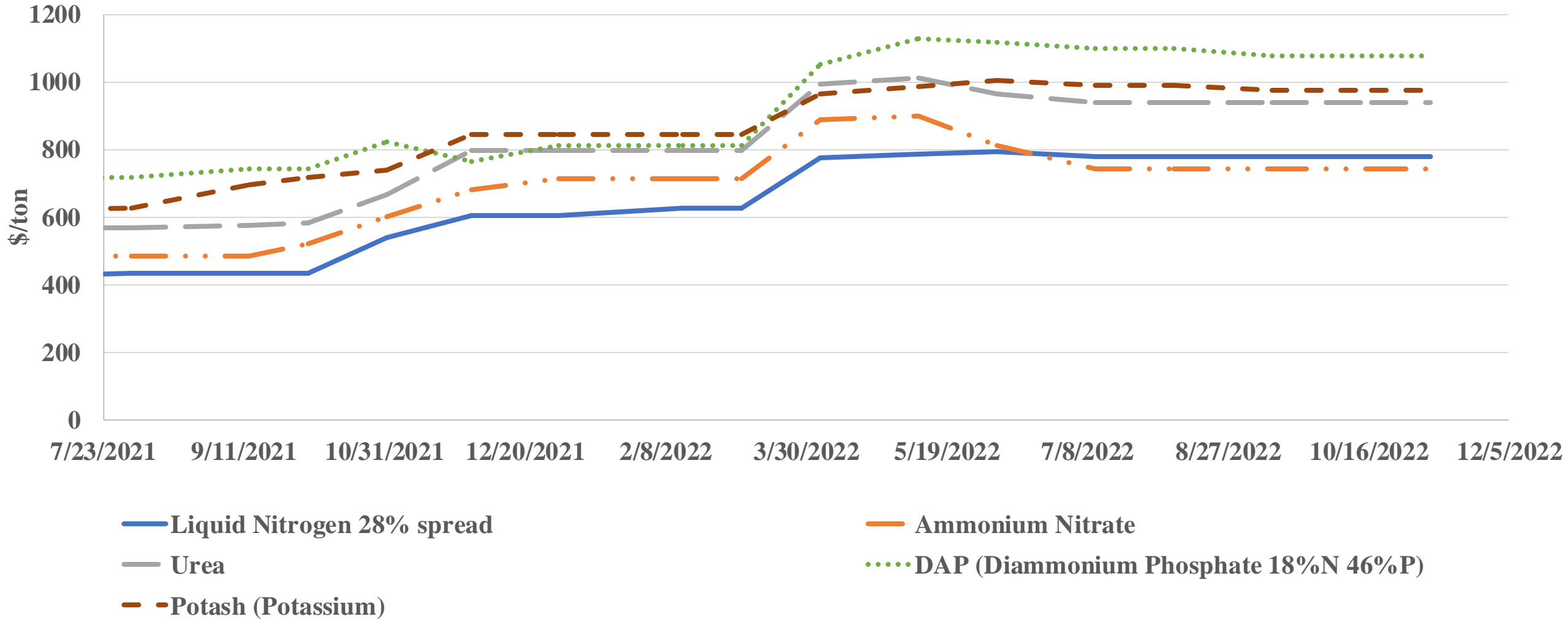
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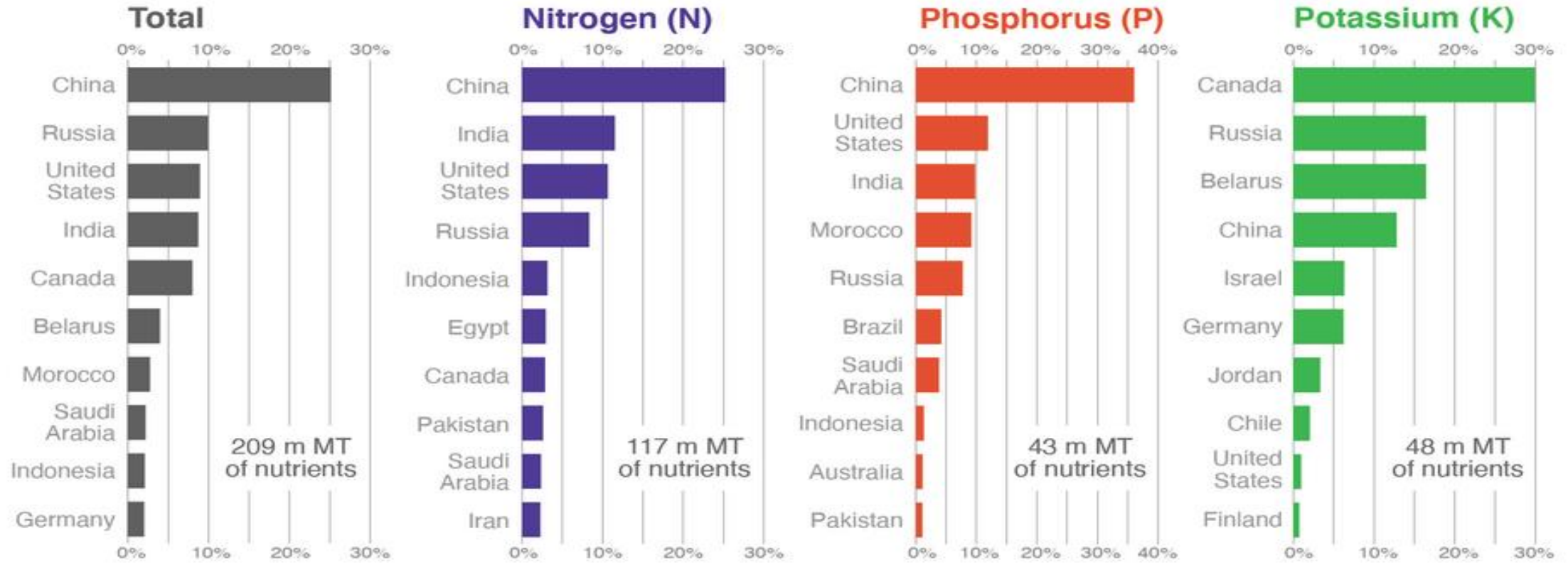
Fertilizer Prices

USDA AMS Alabama Fertilizer Prices



Top Fertilizer Producers

Chart 2. Major Global Fertilizer Suppliers



Source: IFASTAT, 2017-2019 average

Source: USDA FAS International Agricultural Trade Report



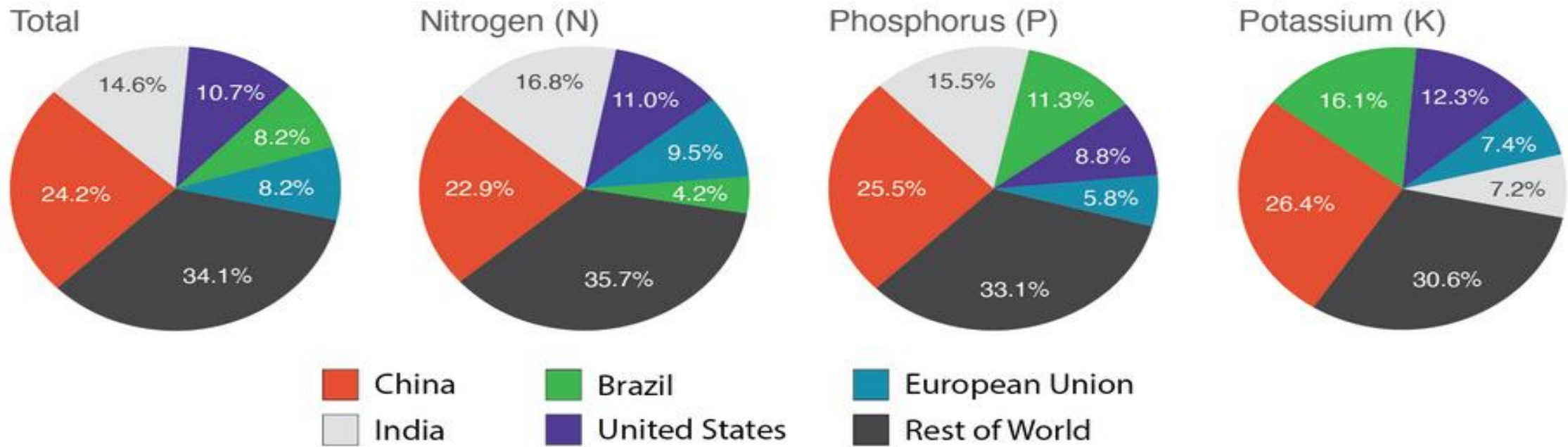
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Top Fertilizer Users

Chart 3. Global Fertilizer Use



Source: IFASTAT, 2017-2019 average

Source: USDA FAS International Agricultural Trade Report



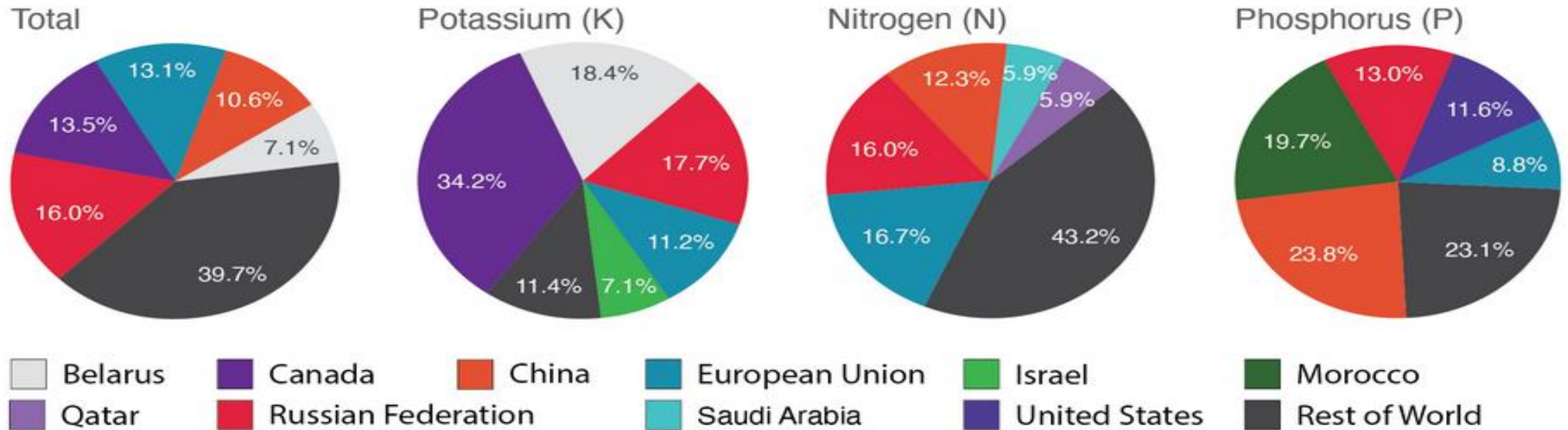
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Top Fertilizer Exporters

Chart 4. Global Fertilizer Exports



Source: IFASTAT, 2017-2019 average

Source: USDA FAS International Agricultural Trade Report



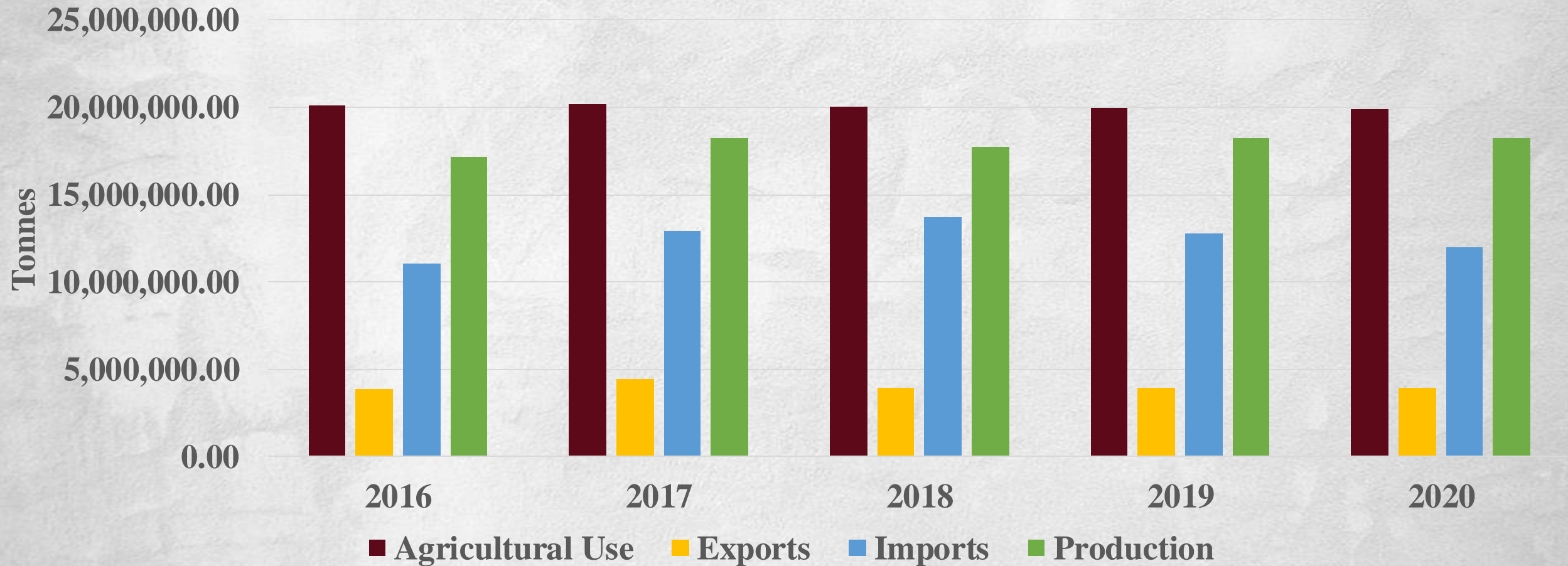
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U.S. Fertilizer Overview

U.S. NPK Production, Imports, Exports, and Use 2016-20



Source: FAOSTAT



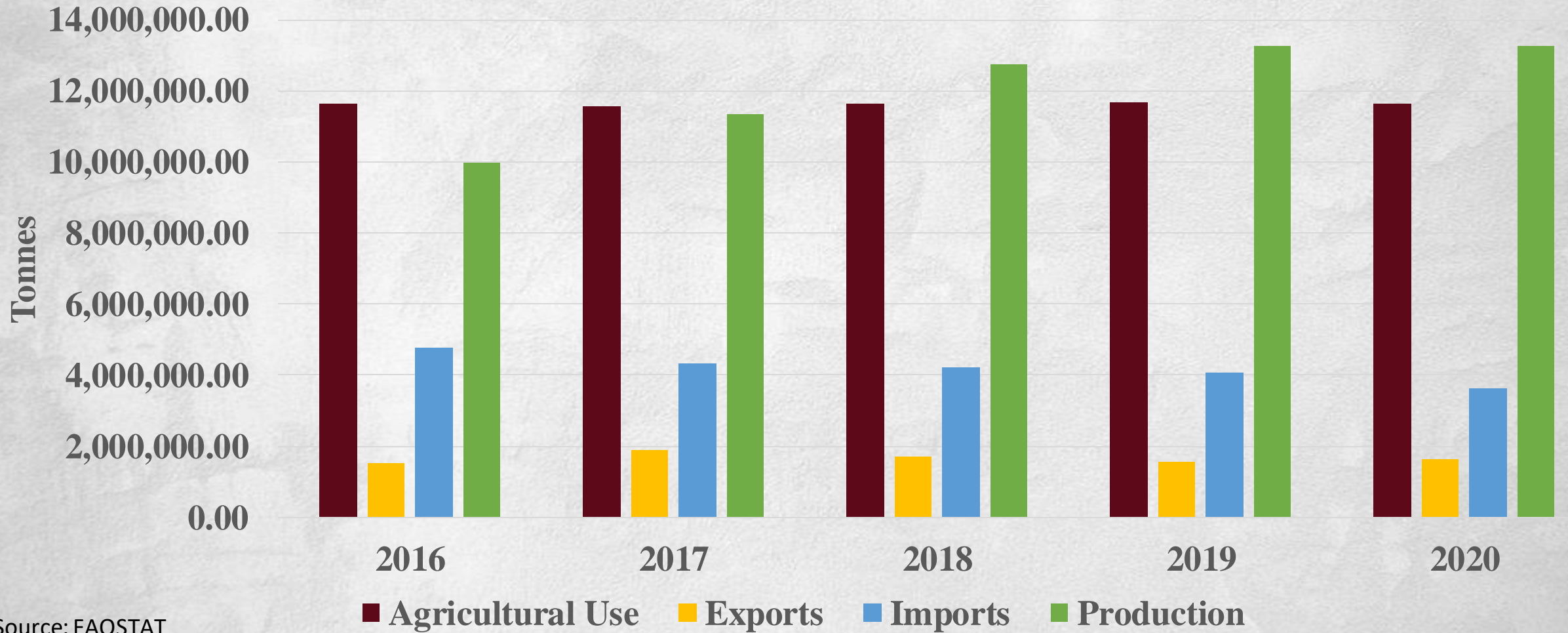
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Nitrogen Overview

Nitrogen Production, Imports, Exports, and Use in U.S. 2016-20



Source: FAOSTAT



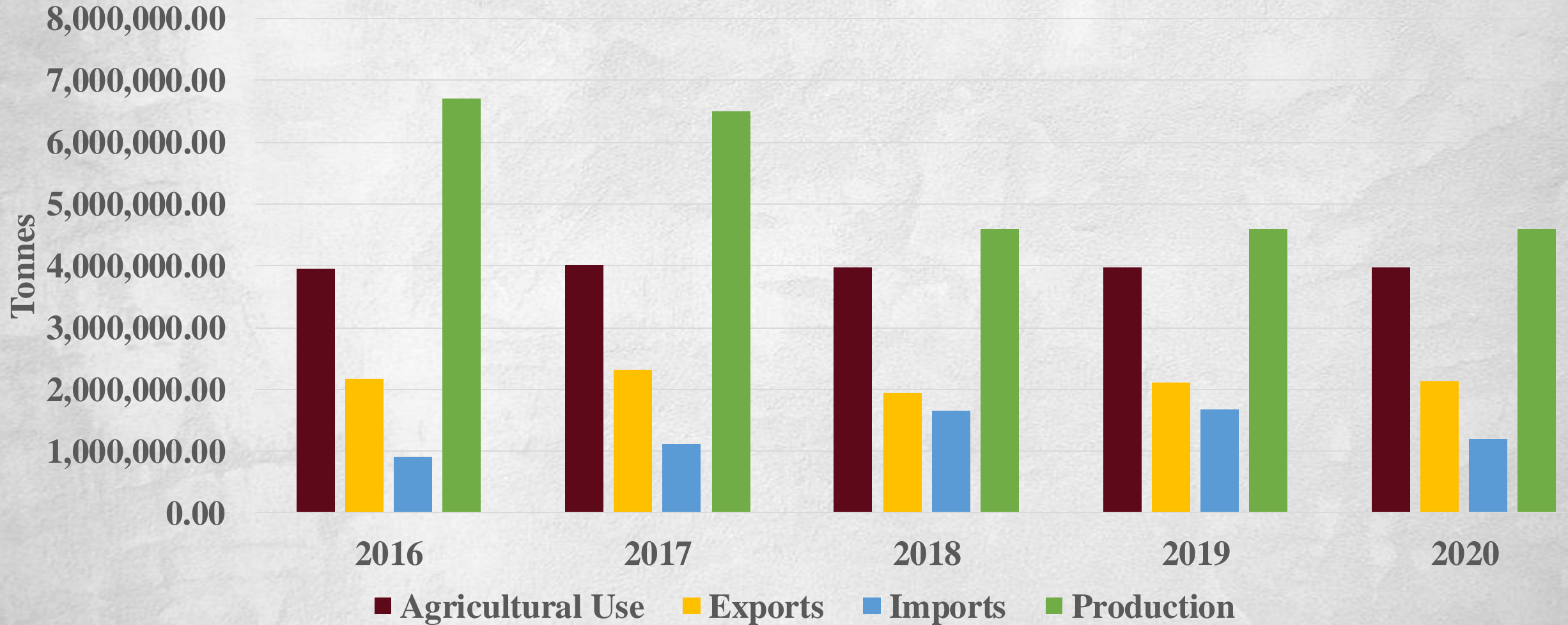
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Phosphate Overview

Phosphate P₂O₅ Production, Imports, Exports, and Use in U.S. 2016-20



Source: FAOSTAT



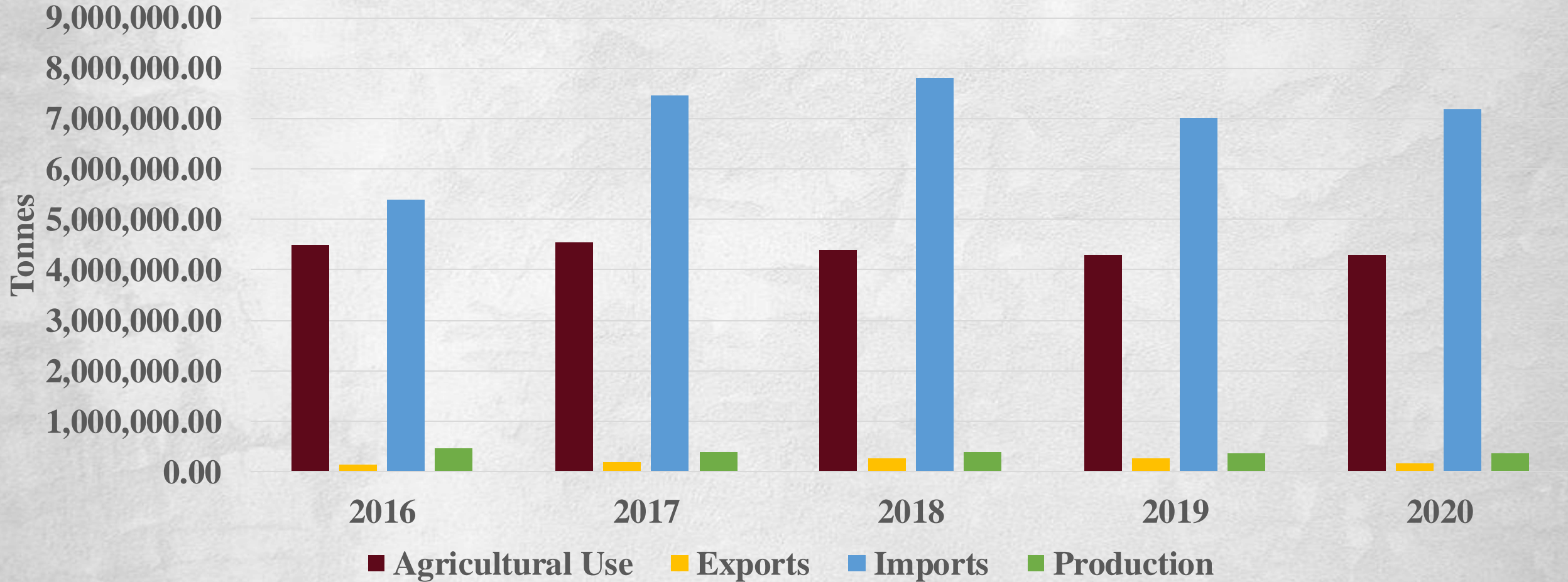
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Potash Overview

Potash K₂O Production, Imports, Exports, and Use in U.S. 2016-20



Source: FAOSTAT



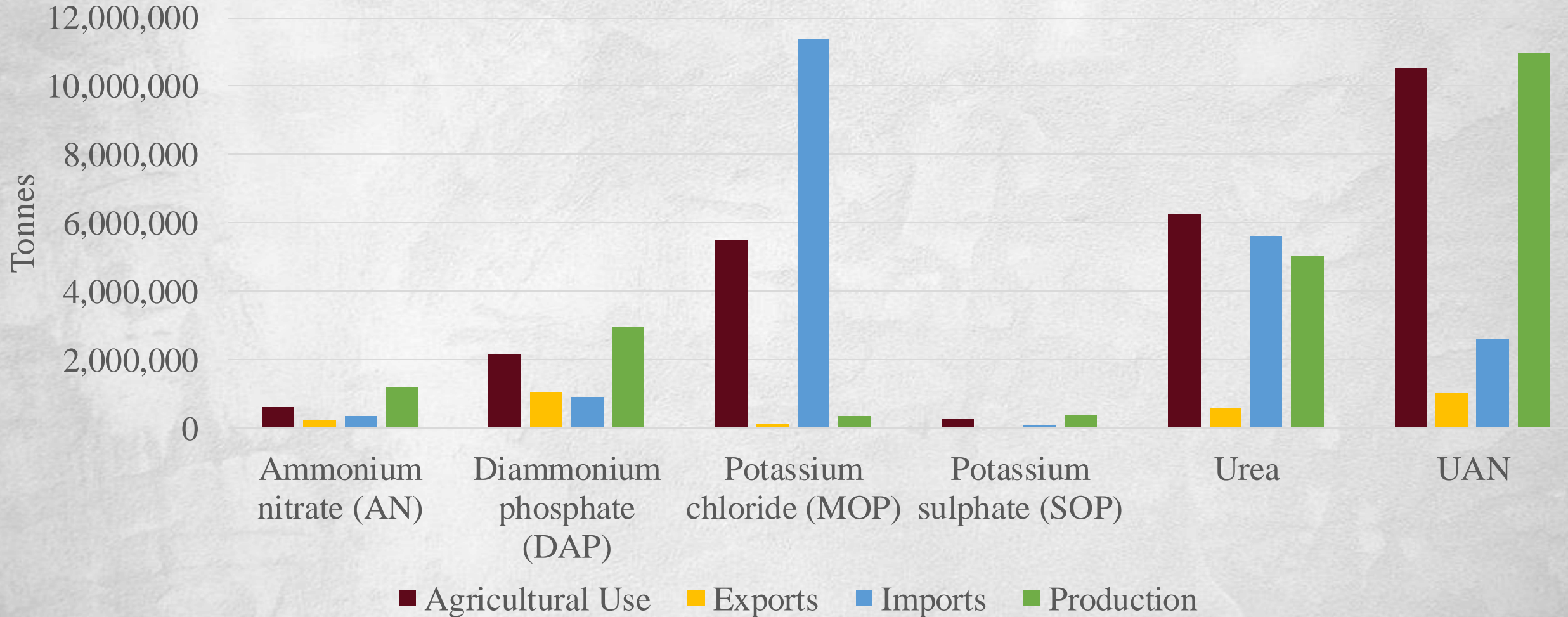
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Fertilizer Products

Average Fertilizer Production, Import, Export, and Use by Product 2016-19



Source: FAOSTAT

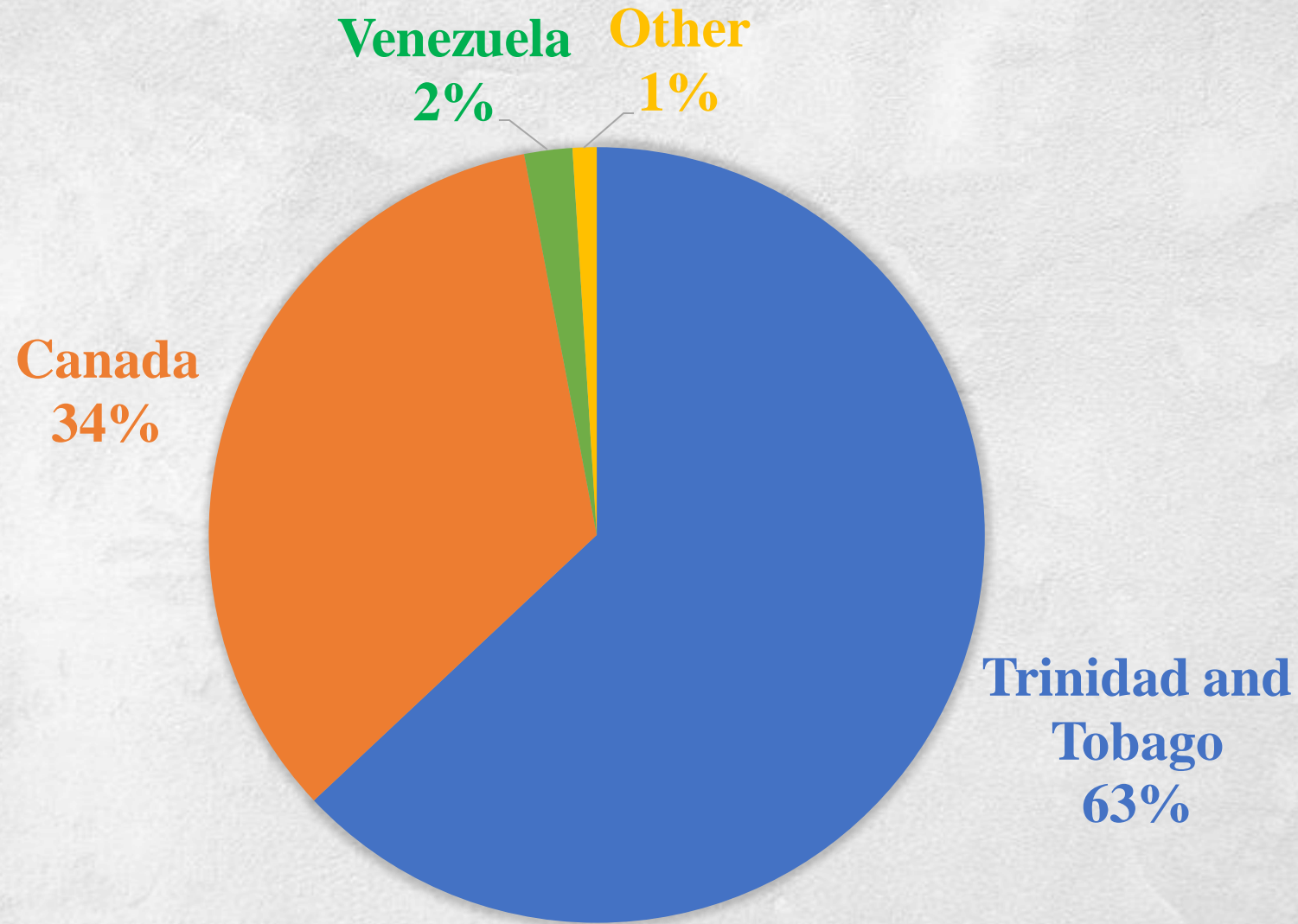


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U.S. Nitrogen Import Sources 2017-20



Source: U.S. Geological Survey 2021, Mineral commodity summaries 2021

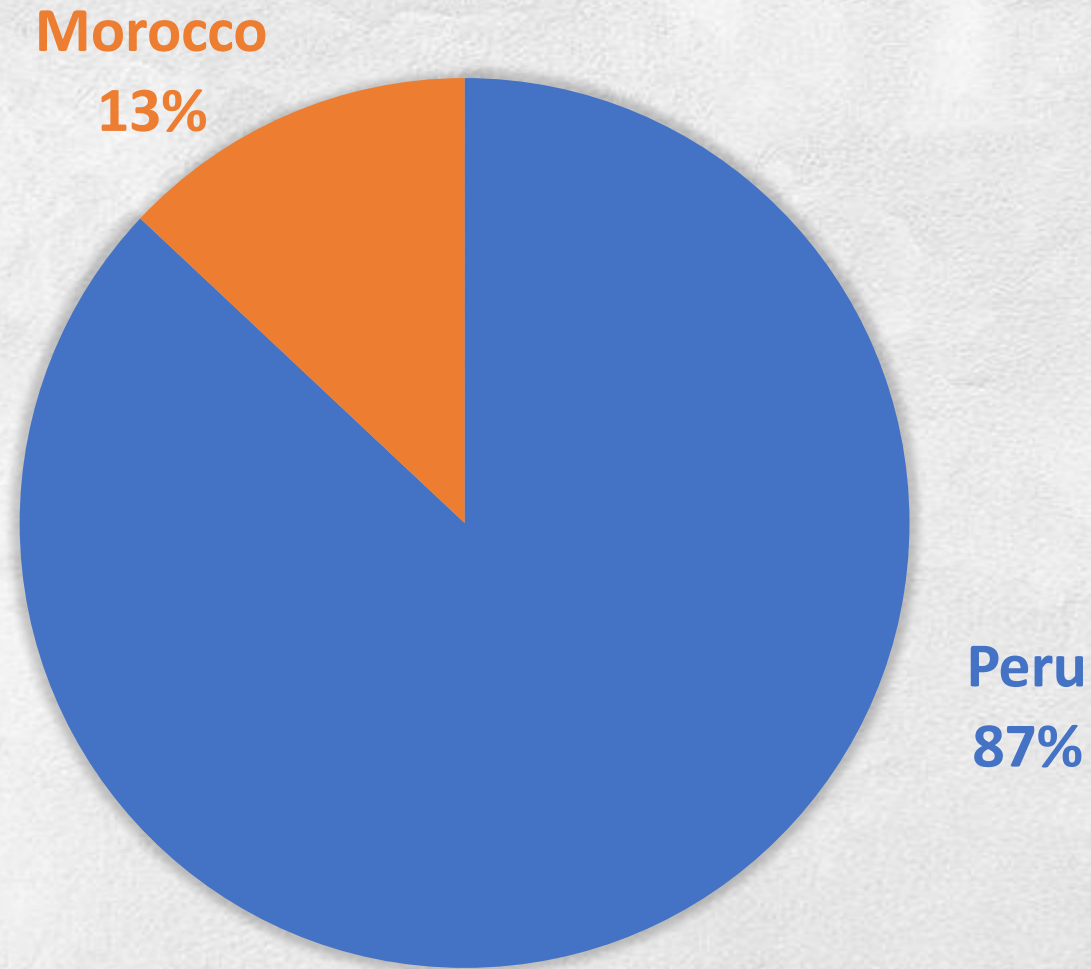


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U.S. Phosphorus Import Sources 2017-20



Source: U.S. Geological Survey 2021, Mineral commodity summaries 2021

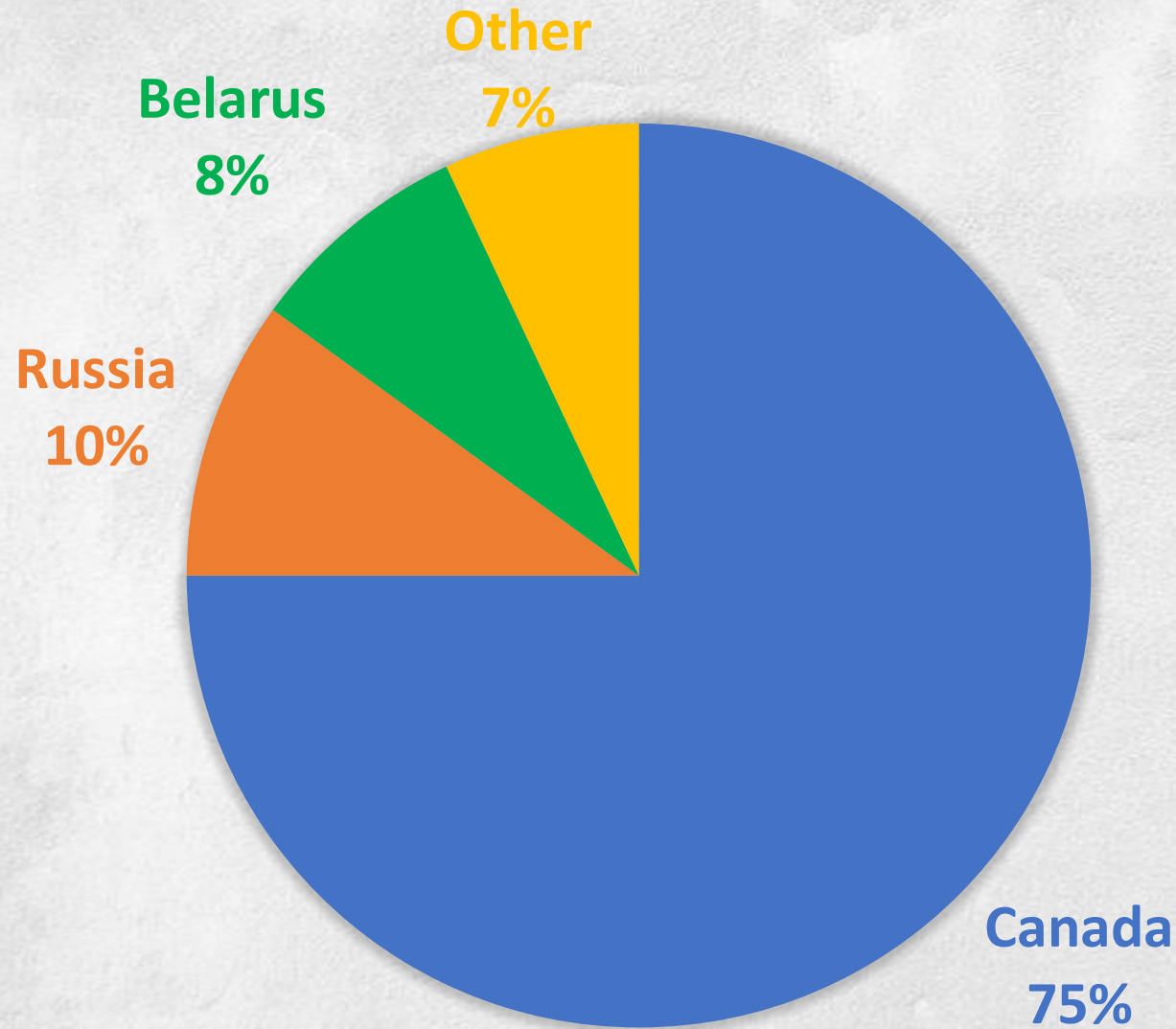


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U.S. Potash Import Sources 2017-20



Source: U.S. Geological Survey 2021, Mineral commodity summaries 2021



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Fertilizer Outlook

- Russia's invasion of Ukraine
 - Reduced supply of fertilizer
- Crop prices
 - Corn prices especially are highly correlated with fertilizer prices
 - High crop prices will keep fertilizer prices high
- USDA announced support for additional fertilizer production
 - Will take time to have an impact



How to manage high fertilizer costs?

- Important to evaluate what costs are going to be for the next year
 - Soil sampling
 - Budgeting
- Determine break-evens to see which crop is more profitable
- Use risk management tools available



Summary

- Costs continue to rise
- Fertilizer prices likely to stay high if crop prices stay high
- Important to evaluate which crop is best for your situation



Questions?

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