



2022 Fact Book

Nutrien
Feeding the Future™

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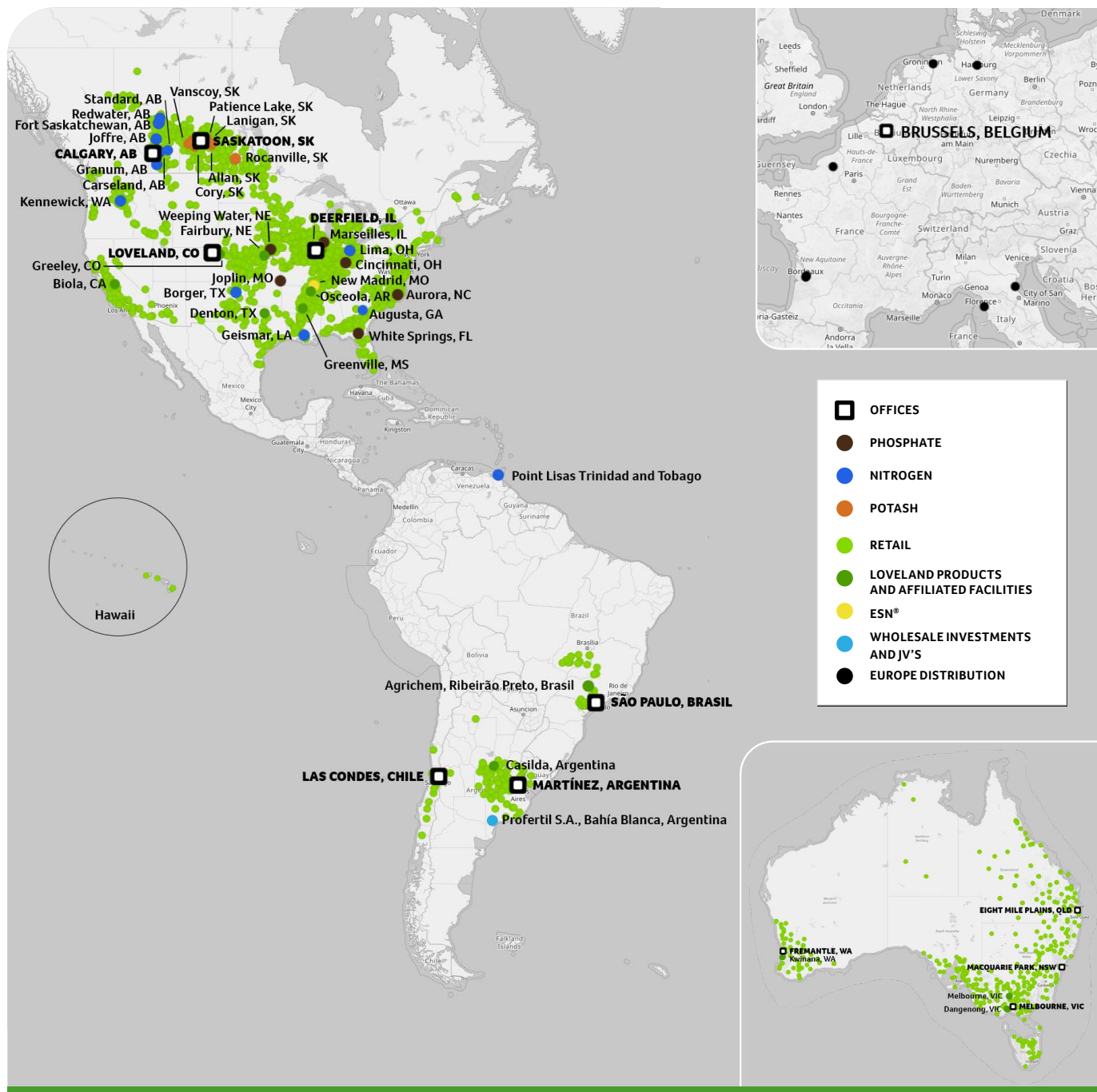
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NUTRIEN – A GLOBAL PRESENCE



North America

Wholesale Fertilizer

6 potash primary production facilities, 8 nitrogen production facilities, 6 phosphate production facilities (3 mines/mineral processing plants & 3 feed plants) and an extensive storage and distribution network.

Nutrien Ag Solutions

> 1,500 Retail locations.

South America

Wholesale Fertilizer

1 nitrogen production facility located in Point Lisas, Trinidad and Tobago.

Profertil S.A. is 50 percent owned by Nutrien Ltd. YPF S.A., a state-controlled oil and gas company in Argentina, owns the other half.

Nutrien Ag Solutions

> 125 Retail locations.

Australia

Nutrien Ag Solutions

> 400 Retail locations.

Europe

Wholesale Fertilizer

Distribution network which includes storage and sales offices in 4 countries (Belgium, France, Germany, and Italy.)

NUTRIEN IS...

As the world's largest provider of crop inputs and services, Nutrien plays a critical role in Feeding the Future by helping growers increase food production in a sustainable manner.

With 23,500 employees and a global footprint of operations and investments, Nutrien's crop inputs and services reach major growing regions all over the world.

Nutrien produces and distributes approximately 27 million tonnes of potash, nitrogen and phosphate products for agricultural, industrial and feed customers globally. Combined with its leading agriculture retail network that services approximately 500,000 grower accounts worldwide, we are well positioned to create value for our stakeholders.

 **Nutrien**[™]
Feeding the Future[™]



Providing Solutions for a Growing World: Our ESG Commitments

Our commitment to feeding the future means taking our role in protecting the planet seriously. By 2050, the agriculture sector will need to grow food for almost 10 billion people. At this pivotal moment in history we need to consider how we feed a growing world while providing nature-positive solutions.

By the year 2030, we aim to make key transformations through ambitious commitments that drive systemic change and lead the next wave of agricultural evolution.

We have developed strategic sustainability priorities that address our most material environmental, social and governance (ESG) risks and opportunities. This means innovating and improving to create long-term value with global impact.

Our focus areas are:

■ Feeding the Planet Sustainably

Strengthen food security by scaling sustainable and productive agriculture

■ Environment and Climate Action

Provide solutions and platforms to achieve emissions reductions in alignment with climate science

■ Inclusive Agriculture

Support rural livelihoods and increase participation of underrepresented stakeholders in agriculture

We aim to achieve six priority commitments by 2030:

Enable Sustainable Acres

Enable growers to adopt sustainable and productive agricultural products and practices on 75 million acres globally.



Achieve Emissions Reduction

Achieve at least a 30 percent reduction in greenhouse gas (GHG) emissions (Scope 1 and 2) per tonne of our products produced, from a baseline year of 2018.



Leverage Innovation & Inclusion

Leverage our farm-focused technology partnerships and investments to drive positive impact in industry and grower innovation and inclusion.



Launch & Scale a Carbon Program

Launch and scale a comprehensive Carbon Program, empowering growers and our industry to accelerate climate-smart agriculture and soil carbon sequestration while rewarding growers for their efforts.



Invest in Low-Carbon Fertilizer

Invest in new technologies and pursue the transition to low-carbon fertilizers, including low-carbon and clean ammonia.



Create New Inclusive Financing

Create new grower financial solutions to strengthen social, economic and environmental outcomes in agriculture.



Achieving our 2030 commitments will be challenging, but necessary – which is why we have integrated ESG into our company's business operations and we are committed to working with stakeholders across our value chain to build a sustainable pathway forward.

These commitments are just the beginning. We also have new ESG performance targets and goals to advance our sustainability strategy. Visit nutrien.com/sustainability/strategy to learn more.

Our Community Investment Approach

Nutrien strives to meaningfully contribute to the communities globally and locally where we operate. We collaborate with community partners who share our values and approach.

Driven by our sustainability strategy, and inspired by our commitment to the Sustainable Development Goals, Nutrien supports community investments that are aligned with our three Focus Areas: Sustainable Agriculture, Environmental Footprint and Diversity and Inclusion.

Our presence in the communities where we have operations, offices or retail branches is also supported by employee volunteerism, stakeholder engagement, emergency relief efforts and our sustainable agriculture education programs.

Nutrien is committed to building a broader public understanding of agriculture, farm/rural safety, global sustainability, environmental stewardship, food security and soil health. Our award-winning education programs are an important way in which we contribute to our communities. These programs raise awareness about critical topics for a growing world, as well as some of the key global initiatives to address them – such as the Sustainable Development Goals.

Nutrien values authentic and collaborative community engagement. Building partnerships, sharing knowledge and listening to diverse perspectives are some of the ways we have helped our community partners achieve sustained and impactful results in their projects and programs.

First and foremost, the purpose of Nutrien's community relations and investment activities is to have a positive impact in the areas where we live and work.



2021 Community Performance by the numbers

\$19M USD

invested in communities

>2,700

community partnerships

\$2M

given to **18** United Way campaigns in **3** countries

>\$335K

contributed for emergency and disaster relief in Nutrien communities

> 1 million

youth around the world reached with the support of **over 150 community partners** through agriculture and environmental education programs

>\$1 million

contributed through matched employee donations

11,460

employee volunteer hours
(9,081 hours outside of work, 2,379 hours during work)

Driving Sustainability in Agriculture: Our Carbon Program

Nutrien is partnering with growers, value-chain stakeholders, governments and NGOs to scale a Carbon Program that is designed to support the advancement of a carbon asset market for the agricultural industry through soil carbon sequestration and reduced GHG emissions.

Our program is unique in several key areas:

- trust-based advisory planning and long-term relationships with the grower;
- grower-specific carbon recipes leveraging Nutrien's leading portfolio of products and technologies, including a full suite of proprietary crop inputs and digital crop planning capabilities using farm and field-level data; and
- year-round on-farm agronomy support, advice and services; inhouse agronomic and soil science expertise, including proprietary digital tools to support the necessary data collection, validation of practice implementation, carbon outcome measurement and verification; and broader sustainability analytics.

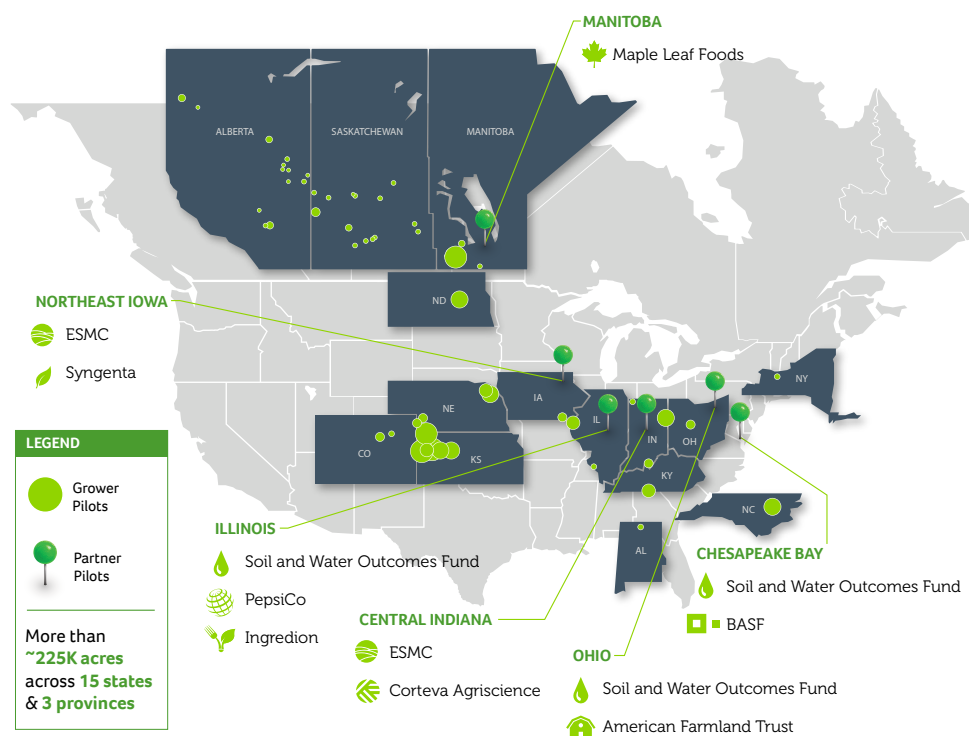
Nutrien's program is currently in development with an anticipated growth and larger-scale implementation in North America and other geographies beginning in 2022. Key components to date include:

- approximately 225,000 pilot acres in 2021 across Canada and the US;
- growers receiving incentive payments for climate-smart practice implementation or carbon and water outcomes, depending on the pilot;
- our portfolio approach including three Canadian provinces and 15 US states representing a variety of crops, soil types and climate zones.

We are engaging with a broad base of key industry partners and supply chain stakeholders across Canada and the United States. Nutrien will look to expand the Carbon Program in 2022 with a focus on nitrogen management practice improvements and resultant emissions outcomes, continuing to incubate scalable options for soil carbon sequestration, and establishing pilots in South America and Australia.

Nutrien's Commitment to ESG Initiatives

Nutrien's Carbon Program is part of a broader sustainability offering designed to benefit growers, governments, and a cross-section of industries while helping the planet and supporting sustainable solutions for feeding a growing global population. It is expected to lead to longer-term environmental, social and governance (ESG) returns for Nutrien and its partners.



Additional information on Nutrien's sustainability commitments is available at nutrien.com/sustainability/strategy.



Our Retail Business

Nutrien operates the largest global direct-to-grower agricultural retail distribution network – known as Nutrien Ag Solutions in the United States, Canada, Australia, Argentina, Chile and Uruguay, and Nutrien Soluções Agrícolas in Brazil. Our focus is to help our customers meet the ever-growing demand for food, and advance the efficiency, profitability, and sustainability of their operations.

As of December 31, 2021, Nutrien operated 1,230 retail facilities in the United States, 295 retail facilities in Canada, 134 retail facilities in South America and 414 retail locations in Australia. Nutrien's Retail operations offer farmers a complete range of seed, liquid and dry fertilizer products, primary crop protection products including herbicides, insecticides,

fungicides, specialty nutrition products and biologicals, as well as a range of related services and solutions including Echelon™ precision agriculture.

Our supply chain and strategic partnerships, including over 1,000 crop input suppliers, ensure reliable delivery of crop inputs when our grower customers need them, where they need them. We have approximately 3,900 agronomists and field experts who provide critical advice from the crop planning stage right through to harvest.

We are committed to supporting the increase of global food production, including the adoption of sustainable agricultural products and practices on **75 million acres** globally by 2030.



Nutrien Ag Solutions Retail Locations Worldwide

United States

Locations: 1,230

Farm Centers: **666**
Satellites: **468**
Terminals: **76**
Distribution Centers: **15**
Plants: **5**

(As of Dec 31, 2021)

Canada

Locations: 295

Farm Centers: **192**
Satellites: **83**
Terminals: **14**
Distribution Centers: **6**

South America

Locations: 134

Farm Centers: **55**
Satellites: **13**
Plants: **5**
Warehouses: **57**
Blending Facilities: **4**

Australia

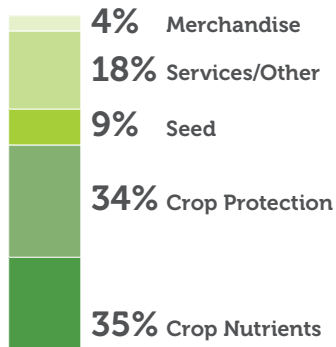
Locations: 414

Farm Centers: **264**
Franchises: **16**
Joint Ventures: **116**
Terminals: **4**
Distribution Centers: **11**
Plants: **3**

NUTRIEN AG SOLUTIONS: SNAPSHOT

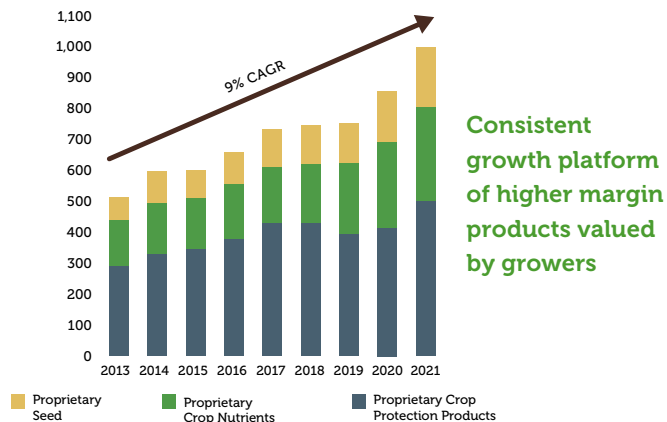
Complete Ag Solutions Offering Gross Margin¹ for 2021 (US\$ Billions)

\$4.6 Billion

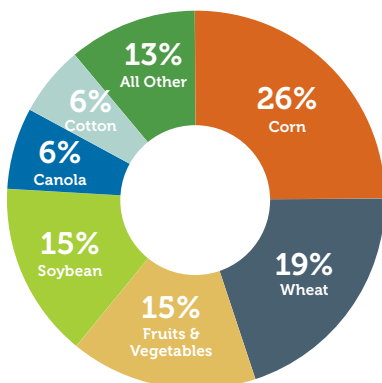


Everything growers need to maximize yields with ~3,900 agronomists

Proprietary Products Gross Margin² (US\$ Millions)

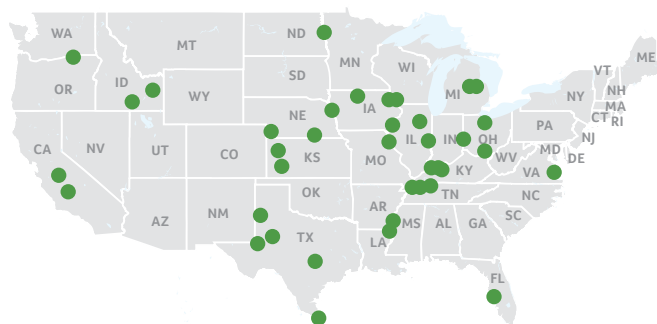


Revenue by Crop for 2021



Crop inputs & services for over 100 different crops

38 Major Hub Locations Across the US



(1) Services/Other includes Nutrien Financial and eliminations.

(2) 2013-2017 data is based upon Agrium Inc. financials. Excludes Dalgety animal health products.



INDUSTRY PARTICIPANTS – US RETAIL

Top US Retail Companies – 2021

(by total sales)

Rank	Company	HQ Location	# States Served	# Retail Outlets	Years in CropLife 100	Crop Protection Sales %	Fertilizer Sales %	Seed Sales %	Custom App. Sales %
1	Nutrien Ag Solutions	Loveland, CO	45	1000 ⁽¹⁾	38	39	39	14	8
2	Helena Agri-Enterprises	Collierville, TN	48	460	37	41	38	17	4
3	Simplot Grower Solutions	Boise, ID	31	234	37	44	42	12	2
4	GROWMARK, Inc.	Bloomington, IL	17	650	35	30	39	19	12
5	Wilbur-Ellis Co.	Aurora, CO	23	138	36	48	38	9	5
6	CHS	Inner Grove Heights, MN	16	270	35	24	55	15	6
7	GreenPoint AG	Decatur, AL	10	99	4	31	46	22	1
8	Agtegra Cooperative	Aberdeen, SD	2	62	31	23	49	21	7
9	MFA Inc.	Columbia, MO	4	166	29	21	56	17	6
10	Co-Alliance	Avon, IN	3	46	22	28	52	13	7
11	NEW Cooperative	Fort Dodge, IA	1	65	12	19	60	14	7
12	Central Valley Ag Cooperative	York, NE	3	64	18	27	54	13	6
13	Aurora Cooperative	Aurora, NE	6	80	30	42	44	8	6
14	Hefty Seed Co.	Baltic, SD	11	49	20	69	2	29	0
15	Valley Agronomics LLC	Nampa, ID	4	35	10	33	58	5	4
16	Ceres Solutions Inc.	Crawfordsville, IN	2	31	11	28	51	14	7
17	Southern States Co-op	Richmond, VA	8	86	31	20	58	16	6
18	Effingham Equity	Effingham, IL	2	27	32	29	48	15	8
19	Sunrise Cooperative	Fremont, OH	1	30	5	29	49	13	9
20	Grow West	Woodland, CA	1	12	17	46	53	1	0

(1) 1000 as per Crop Life: Nutrien has a total of 1230 US retail outlets (666 farm centres, 15 distribution centres, 468 satellites, 76 terminals, and 5 plants)

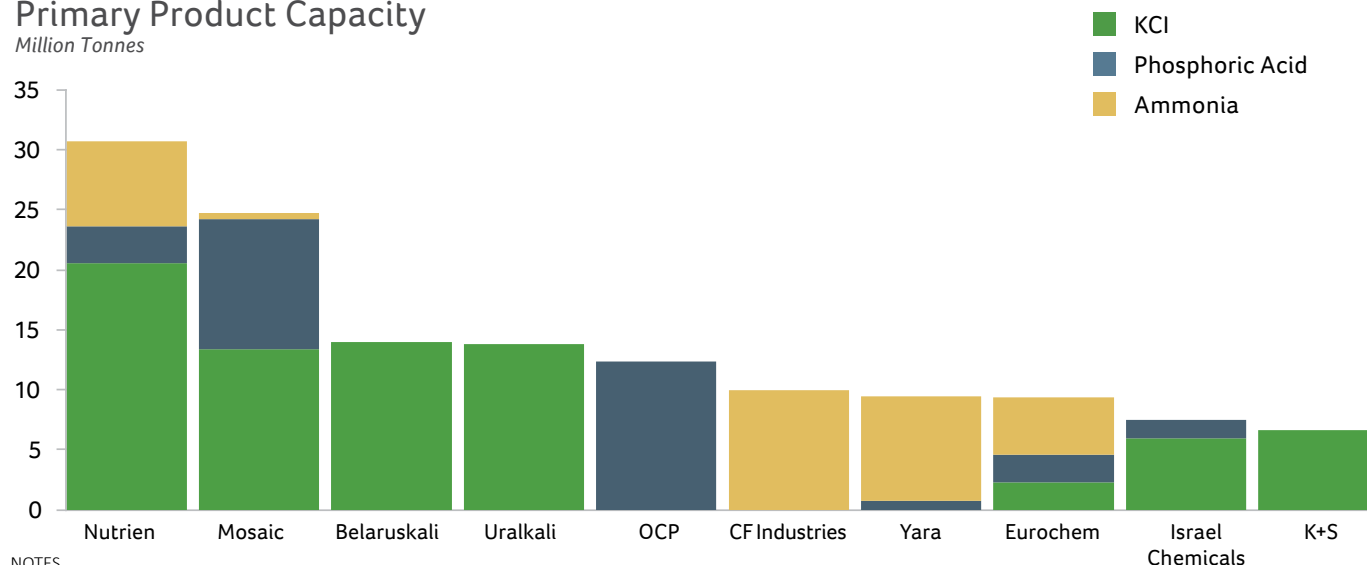
Source: CropLife Magazine, CropLife 100 Report, December 2021

FERTILIZER INDUSTRY OVERVIEW

Largest Global Crop Nutrient Producer

Primary Product Capacity

Million Tonnes



NOTES

- All capacities shown are nameplate capacities as of December 31, 2020.
- Nameplate capacities may exceed operational capacity.
- Includes proportional share of equity stakes where control or marketing rights exist.
- Phosphoric acid capacity is adjusted to a merchant grade acid (MGA) basis of 56% P₂O₅.
- Excluding Chinese companies/capacity.

Source: Company Reports, CRU

Nutrient Overview

	Potash (KCl)	Nitrogen (Urea)	Phosphate (DAP/MAP/TSP)
How it's Produced	Mined from evaporated sea deposits	Synthesized from hydrogen source, steam and air	Mined from sea fossils
Number of Major Producing Countries ¹	10	~65	~40
Nutrien Percent of World Capacity	21%	3%	3%
Percent of Global Production Traded	78%	30%	51%
Largest Importers	Brazil, US, China, India	US, India, Brazil	India, Brazil
Time for Greenfield (including ramp-up)	Minimum 7 years ²	Minimum 3 years ³	Minimum 3-4 years ⁴
Cost for Greenfield ⁵ (including infrastructure)	CAD \$5.1-\$6.7 billion ² 2 million tonnes KCl	US \$1.5-\$2.5 billion ³ 1 million tonnes NH ₃	US \$5.1 billion ⁴ 1 million tonnes P ₂ O ₅

See Note pertaining to qualified person review under National Instrument 43-101 Standards of Disclosure for Mineral Projects (NI 43-101) on page 19.

(1) Countries producing more than 500,000 tonnes annually

(2) Estimated time and cost for a conventional greenfield mine in Saskatchewan.

(3) Estimate for an ammonia/urea complex.

(4) Does not include time permitting, research and engineering or ammonia plant. Includes phosphate rock mine and beneficiation, sulfuric acid and DAP/MAP granulation plants.

(5) Includes rail, utility systems, port facilities and, if applicable, cost of deposit.

Source: Fertecon, CRU, Wood, Company Reports

Most potash is produced from conventional underground mines.

Potassium plays an important role in the growth and development of plants by activating enzymes, enhancing photosynthesis, aiding nitrogen uptake as well as increasing test weights and helping the plant withstand stress. It also aids in water retention and improves the quality of crops.

Potassium chloride (KCl), commonly called potash, is mined from ore deposits located deep underground or extracted from salt lakes or seas. Conventional underground mines account for nearly 80 percent of global potassium chloride capacity, and underground solution mines for about 6 percent. The remainder is obtained by harvesting natural brines from potassium-rich water bodies, typically using solar evaporation.

Potash is sold into the agricultural market primarily as solid granular and standard products. Granular product has a larger and more uniformly-shaped particle that can be easily blended with solid nitrogen and phosphate fertilizers; it is typically used in more advanced agricultural markets such as the US and Brazil. Standard product is more commonly used in major Asian markets.



Nitrogen is used in many forms.

Nitrogen (N) is required by every living cell and is part of the genetic blueprints RNA and DNA. It is a fundamental building block of plant proteins that improve crop yield and quality. Nitrogen is also essential for proper animal nutrition and maturation.

Synthesized from hydrogen sources (primarily natural gas or coal), steam and nitrogen from the air, ammonia (NH_3) is a concentrated source of nitrogen and the basic feedstock for all upgraded nitrogen products. It is also used to make industrial products and as a direct-application fertilizer.

The most commonly used nitrogen fertilizer is urea, which is also the feedstock for industrial products such as plastics, resins, adhesives and increasingly for emissions control. Liquid forms of urea and ammonium nitrate are combined into Urea Ammonia Nitrate (UAN) solution, which is used in agriculture. Ammonium nitrate is made by combining ammonia with nitric acid and has both industrial and agricultural uses. Low carbon ammonia is expected to play a key role as a fuel and hydrogen carrier in the medium to long term.



How are phosphate fertilizers produced?

Phosphate (P) is the major source of phosphorus, the energizer of plant production. It is crucial to key energy reactions in plants (such as photosynthesis), speeding maturity and reproduction, and increasing yield. In animals, phosphate is a critical component in biochemical reactions essential to muscle contraction and normal body growth, maintenance and repair. Phosphate is also used in industrial products such as soft drinks, food products and metal treatment.

Phosphate rock is mined from underground ore deposits and dissolved in a mixture of phosphoric and sulfuric acids. This results in production of additional phosphoric acid, which is the feedstock for most fertilizer, industrial and feed phosphate products.

This phosphoric acid can be combined with ammonia and granulated to produce the solid fertilizers DAP and MAP, evaporated to produce merchant-grade phosphoric acid (MGA), or further evaporated to produce superphosphoric acid (SPA), which is then converted into liquid fertilizer.



POTASH PRODUCTION FACILITIES

Production Facilities and Annual Production Capacities

Production Capacity

(product tonnes per year)

Potash Based Fertilizers

Canada	Red	White	Total Nameplate Capacity	Total Operational Capability (2021)	Total Operational Capability (2022F)
Allan, Saskatchewan					
Potash KCl	3,600,000	400,000	4,000,000	3,000,000	3,000,000
Cory, Saskatchewan					
Potash KCl	2,200,000	800,000	3,000,000	1,800,000	2,100,000
Lanigan, Saskatchewan					
Potash KCl	3,800,000	—	3,800,000	2,800,000	2,800,000
Patience Lake, Saskatchewan					
Potash KCl	—	300,000	300,000	300,000	300,000
Rocanville, Saskatchewan					
Potash KCl	6,500,000	—	6,500,000	5,200,000	5,200,000
Vanscoy, Saskatchewan					
Potash KCl (MOP)	3,024,000	—	3,024,000	1,000,000	1,400,000
Total	19,124,000	1,500,000	20,624,000	14,100,000	14,800,000

See Note pertaining to qualified person review under NI 43-101 on page 19.

Note: 2022F total operational capability reflects plans to increase Nutrien's potash operational capability to approximately 15 million tonnes in 2022.



A Global Leader in Low-Carbon Ammonia: The Next Steps in Our Journey

Nutrien has actively been pursuing the development of low-carbon ammonia for more than a decade and is one of the world's largest low-carbon ammonia producers with approximately 1 million tonnes of production capability at our Redwater and Joffre, Alberta operations, as well as our Geismar, Louisiana facility.

Ammonia is one of the most important commodities in the world, with good reason. In addition to being the base for nitrogen fertilizer, ammonia is used in pharmaceutical applications, is a building block for plastic products, can be used as a refrigerant, and is a component of various cleaning products.

But it can also be used as a low-carbon fuel that can be produced, stored and shipped around the globe. Pure ammonia is composed of a single nitrogen atom bonded to three hydrogen atoms – it contains no carbon – so when fully combusted, the only end products are nitrogen and water vapor. With credible low- and zero-carbon pathways for ammonia production, there's significant interest globally in using ammonia as a fuel.

In July 2021, Nutrien announced two partnerships that leverage our strength as a low-carbon ammonia producer, and aim to take our efforts to the next level.

First, we highlighted our partnership with the US Department of Energy (DOE) and other organizations to explore flexible zero-carbon ammonia production. We're working together to develop a 1 metric tonne-per-day, low- and zero-carbon ammonia facility, and use the resulting ammonia for agriculture, electricity generation and/or as a fuel.

Next, we announced a collaboration agreement with EXMAR – a leading player and innovator in the transportation of liquefied gas products and one of our global ammonia shipping partners – to develop and build a low-carbon, ammonia-fueled vessel.

In May 2022, we announced that we are evaluating Geismar, Louisiana as the site to build the world's largest clean ammonia facility. Building on the company's expertise in low-carbon ammonia production, clean ammonia will be manufactured using innovative technology to achieve at least a 90 percent reduction in CO₂ emissions.

Helping the world transition to low-carbon fertilizers, including low-carbon ammonia, is one of the 2030 commitments in Nutrien's Feeding the Future Plan.

Visit nutrien.com/clean-ammonia to learn more.

Ammonia is one of the most important commodities in the world, with good reason. In addition to being a key form of nitrogen fertilizer, ammonia is used in pharmaceutical applications, is a building block for plastic products, can be used as a refrigerant, and is a component of various cleaning products.



NITROGEN PRODUCTION FACILITIES

Production Facilities and Annual Production Capacities

PRODUCTION CAPACITY

(product tonnes per year)

Nitrogen Based Fertilizers

Canada

Carlsland, Alberta

Ammonia ¹ (gross)	540,000
Ammonia ² (net)	120,000
Solid Urea ³	525,000

Joffre, Alberta

Ammonia ¹ (gross)	490,000
Ammonia ² (net)	490,000

Fort Saskatchewan, Alberta

Ammonia ¹ (gross)	450,000
Ammonia ² (net)	200,000
Solid Urea ³	425,000

Redwater, Alberta

Ammonia ¹ (gross)	925,000
Ammonia ² (net)	230,000
Solid Urea ³	635,000
UAN ⁵	220,000
Ammonium Nitrate ⁶	115,000
Ammonium Sulfate	710,000

Upgrade Facilities⁽⁷⁾

Carlsland, Alberta

ESN [*]	200,000
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Standard & Granum, Alberta

UAN ⁵	120,000
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Total Canada

Ammonia ¹ (gross)	2,405,000
Ammonia ² (net)	1,040,000
Solid Urea ³	1,585,000
UAN ⁵	340,000
Ammonium Nitrate ⁶	115,000
Ammonium Sulfate	710,000
ESN [*]	200,000

Equity Investments

Argentina

Bahía Blanca (Profertil S.A. 50% ownership)

Ammonia ¹ (gross)	405,000
Ammonia ² (net)	15,000
Solid Urea ³	670,000

PRODUCTION CAPACITY

(product tonnes per year)

Nitrogen Based Fertilizers

US

Augusta, Georgia

Ammonia ¹ (gross)	765,000
Ammonia ² (net)	200,000
Solid Urea ³	260,000
Nitric Acid ⁴	40,000
UAN ⁵	400,000
Ammonium Nitrate ⁶	415,000

Borger, Texas

Ammonia ¹ (gross)	450,000
Ammonia ² (net)	95,000
Solid Urea ³	590,000

Geismar, Louisiana⁽⁸⁾

Ammonia ¹ (gross)	535,000
Nitric Acid ⁴	525,000
UAN ⁵	915,000

Lima, Ohio

Ammonia ¹ (gross)	725,000
Ammonia ² (net)	365,000
Solid Urea ³	350,000
Nitric Acid ⁴	30,000
UAN ⁵	150,000
Ammonium Nitrate ⁶	55,000

Upgrade Facilities⁽⁷⁾

Kennewick, Washington

Nitric Acid ⁴	5,000
UAN ⁵	320,000
Ammonium Nitrate ⁶	100,000

New Madrid, Missouri

ESN [*]	265,000
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Total US

Ammonia ¹ (gross)	2,475,000
Ammonia ² (net)	660,000
Solid Urea ³	1,200,000
Nitric Acid ⁴	600,000
UAN ⁵	1,785,000
Ammonium Nitrate ⁶	570,000
ESN [*]	265,000

South America

Point Lisas, Trinidad and Tobago⁽⁹⁾

Ammonia ¹ (gross)	1,860,000
Ammonia ² (net)	1,465,000
Solid Urea ³	680,000

(1) Annual capacity estimates include allowances for normal operating plant conditions.

(2) Net ammonia reflects gross ammonia capacity less ammonia used to produce upgraded products based on product mix shown.

(3) Solid urea reflects gross urea liquor capacity less urea used to produce UAN, ESN^{*} and DEF based on product mix shown.

(4) Nitric Acid reflects net capacity of nitric acid based on product mix shown. Net capacity shown on 100% nitric acid basis. Finished goods typically 70% nitric acid basis.

(5) Reflects tonnes of UAN on a 32% Nitrogen basis.

(6) Ammonium nitrate reflects net capacity of AN based on product mix shown. Includes prilled products and solutions produced for sale.

(7) Upgrade facility that uses ammonia and urea from other sources. Upgrade facilities use ammonia, they do not purchase natural gas to produce their own ammonia and urea.

(8) Full production requires certain amount of ammonia from external sources.

(9) Gross and net ammonia capacity for Trinidad exclude approximately 340,000 tonnes of capacity that was indefinitely closed in 2020.

Note: Table excludes sales of urea solutions into the DEF market based on product mix shown

PHOSPHATE PRODUCTION FACILITIES

Production Facilities and Annual Production Capacities

PRODUCTION CAPACITY

(product tonnes per year)

Phosphate Based Fertilizers

US

Aurora, North Carolina

Ore Concentrate	5,400,000
Phosphoric Acid (P_2O_5)	1,200,000
DAP/MAP	800,000
Liquids	2,000,000
SPA ⁽¹⁾	700,000
Purified Acid	300,000

White Springs, Florida

Ore Concentrate	2,000,000
Phosphoric Acid (P_2O_5)	540,000
MAP	765,000
MAP+MST [*]	325,000
SPA	700,000

Cincinnati, OH | Joplin, MO | Marseilles, IL

Weeping Water, NE

Phosphates	700,000
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Nutrien Global

Nitrogen and Phosphate Capacity

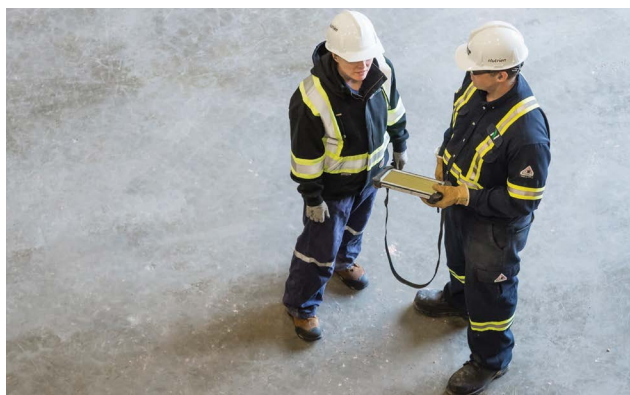
('000 product tonnes per year)

Ammonia ² (gross)	7,080
Ammonia (net)	3,505
Urea ³	3,465
Ammonium Nitrate	850
Ammonium Sulphate	710
Solutions/Other/ESN [®]	2,884
Phosphoric Acid (P_2O_5)	1,740
DAP/MAP	1,565

(1) Represents annual superphosphoric acid capacity. A substantial portion is consumed internally in the production of downstream products. The balance is exported to phosphate fertilizer producers and sold domestically in North America to dealers who custom-mix fertilizer.

(2) Excludes share of Nutrien's Joint Venture ammonia capacity.

(3) Solid urea reflects gross urea liquor capacity less urea used to produce UAN, ESN[®] and DEF.



INDUSTRY PARTICIPANTS – GLOBAL

2021 MOP Operational Capabilities⁽¹⁾ and Locations

('000 tonnes of KCl per year)

	Company	Site	Capability
Canada	Nutrien	Allan, SK	3,000
	Nutrien	Cory, SK	1,800
	Nutrien	Lanigan, SK	2,800
	Nutrien	Patience Lake, SK	300
	Nutrien	Rocanville, SK	5,200
	Nutrien	Vanscoy, SK	1,000
	K+S	Bethune, SK	2,185
	Mosaic	Belle Plaine, SK	3,000
	Mosaic	Colonsay, SK	600
	Mosaic	Esterhazy, SK	4,535
Total			24,420
US	Intrepid Potash	Cane Creek, UT	100
	Intrepid Potash	Carlsbad HB, NM	160
	Intrepid Potash	Wendover, UT	90
Total			350
Total All			24,770
Iran	Iran Potash Mineral & Industrial Co	Iljaq	10
	IMPASCO	Khor	30
Total			40
Israel	ICL Group	Sdom	4,160
Jordan	Arab Potash Co	Safi	2,650
Total All			6,850
Laos	CNAMPGC	Nongbok (Sino-Agri)	340
	Sichuan Kaiyuan Group	Thakhek	500
	Yuntianhua (YTH)	Thong Mang	0
	Gov. of Laos, Qinghai Kunlun Investment & Dev Co, Sinohydro Corp	Xaythany	0
Total All			840

	Company	Site	Capability
Germany	Siem Industries	Bleicherode	110
	K+S	Hattorf	600
	K+S	Neuhof-Ellers	200
	K+S	Sigmundshall	0
	K+S	Unterbreizbach	440
	K+S	Wintershall	480
	K+S	Zielitz	1,880
Total			3,710
Spain	ICL Group	Sallent	-
	ICL Group	Suria	950
Total			950
UK	ICL Group	Boulby	0
Total All			4,660
Belarus	Belaruskali	Petrikov	570
	Belaruskali	Soligorsk-1	3,010
	Belaruskali	Soligorsk-2	2,765
	Belaruskali	Soligorsk-3	3,270
	Belaruskali	Soligorsk-4	3,500
Total			13,115
Russia	Uralkali	Berezniki-2	1,900
	Uralkali	Berezniki-3	2,280
	Uralkali	Berezniki-4	3,230
	Uralkali	Solikamsk-1	950
	Uralkali	Solikamsk-2	960
	Uralkali	Solikamsk-3	2,850
	EuroChem	Usolsky Potash	2,425
Total			14,595
Turkmenistan	Turkmenhimiya	Garlyk	70
Uzbekistan	Uzkimyosanoat	Dekhkanabad	475
Total All			28,255
Bolivia	Comibol	Uyuni	60
Brazil	Mosaic Fertilizantes	Taquari	560
Chile	SQM	Atacama	1,730
	Rockwood Holdings	Atacama South	160
Total			1,890
Total All			2,510
China	QSL Industry	Qarhan	5,775
	Others	Qinghai	2,245
Total			8,020
Total World			75,905

See Note pertaining to qualified person review under NI 43-101 on page 19.

(1) Operational capability usually accounts for normal maintenance routines but without further allowance for unplanned interruptions. Nutrien capabilities are from 2021. Source: CRU Potassium Chloride Market Outlook February 2022 Supply Database "Effective Capacity Forecasts"

INDUSTRY PARTICIPANTS – NORTH AMERICA

2021 Ammonia Plant Capacities⁽¹⁾ and Locations

('000 tonnes of ammonia per year)

	Company	Site	Capacity
Canada	Nutrien	Carseland, AB	540
	Nutrien	Fort Saskatchewan, AB	450
	Nutrien	Joffre, AB	490
	Nutrien	Redwater, AB	925
	CF Industries Inc.	Courtright, ON	435
	CF Industries Inc.	Medicine Hat, AB	1,133
	Koch Fertilizer Canada Inc.	Brandon, MB	548
	Sherritt International Inc.	Fort Saskatchewan, AB	282
	Yara Belle Plaine Inc.	Belle Plaine, SK	682
Total Canada			5,485
US	Nutrien	Augusta, GA	765
	Nutrien	Borger, TX	450
	Nutrien	Geismar, LA	535
	Nutrien	Lima, OH	725
	Advansix	Hopewell, VA	513
	CF Industries Inc.	Donaldsonville, LA	3,933
	CF Industries Inc.	Port Neal, IA	1,148
	CF Industries Inc.	Verdigris, OK	1,098
	CF Industries Inc.	Woodward, OK	435
	CF Industries Inc.	Yazoo City, MS	508
	Chevron Chem. Co.	El Segundo, CA	24
	Coffeyville Resources	Coffeyville, KS	425
	Coffeyville Resources	E. Dubuque, IL	350
	Dakota Gasification Co	Beulah, ND	365
	Dyno Nobel Inc.	Cheyenne, WY	173
	Dyno Nobel Inc.	St. Helens, OR	100
	Dyno Nobel Inc.	Waggaman, LA	800
	Green Valley Chemical	Creston, IA	32
	Iowa Fertilizer Co. (OCI Group)	Wever, IA	914
	J.R. Simplot Co.	Rock Springs, WY	210
	Koch Industries Inc.	Beatrice, NE	248
	Koch Industries Inc.	Dodge City, KS	280
	Koch Industries Inc.	Enid, OK	1,016
	Koch Industries Inc.	Fort Dodge, IA	300
	LSB Industries	Cherokee, AL	171
	LSB Industries	El Dorado, AK	447
	LSB Industries	Pryor, OK	223
	Mosaic Company	Faustina, LA	508
	Nebraska Nitrogen	Geneva, NE	91
	OCI Beaumont LLC	Beaumont, TX	331
	Shoreline Chemical	Gordon, GA	30
	Yara/BASF JV	Freeport, TX	726
Total US			17,874
Total Canada and US			23,359
Trinidad and Tobago	Nutrien	Point Lisas	2,200
	Caribbean Nitrogen Co. Ltd.	Point Lisas	650
	Methanol Holdings (Trinidad) Ltd.	Point Lisas	648
	Nitrogen (2000) Unlimited	Point Lisas	650
	Point Lisas Nitrogen Ltd. (CF/Koch)	Point Lisas	653
	Trinidad Nitrogen Co.	Point Lisas	995
Total Trinidad and Tobago³			5,796

(1) Capacities for Nutrien are based on internal calculation method.
Source: IFA World Ammonia Capacities, CRU Ammonia Fertilizer Plant Capacity Database, Nutrien.

INDUSTRY PARTICIPANTS – NORTH AMERICA

2021 Urea Plant Capacities⁽¹⁾ and Locations

('000 tonnes of urea per year, represents full urea synthesis capacity including solid urea and urea liquor for UAN, DEF and other products)

	Company	Site	Capacity
Canada	Nutrien	Carseland, AB	800
	Nutrien	Fort Saskatchewan, AB	425
	Nutrien	Redwater, AB	715
	CF Industries Inc.	Courtright, ON	290
	CF Industries Inc.	Medicine Hat, AB	735
	Koch Fertilizer Canada Inc.	Brandon, MB	217
	Yara Belle Plaine Inc.	Belle Plaine, SK	1,072
Total Canada			4,254
US	Nutrien	Augusta, GA	630
	Nutrien	Borger, TX	610
	Nutrien	Geismar, LA	400
	Nutrien	Lima, OH	500
	CF Industries Inc.	Donaldsonville, LA	2,572
	CF Industries Inc.	Port Neal, IA	1,568
	CF Industries Inc.	Verdigris, OK	623
	CF Industries Inc.	Woodward, OK	817
	CF Industries Inc.	Yazoo City, MS	288
	Coffeyville Resources	Coffeyville, KS	758
	Coffeyville Resources	E. Dubuque, IL	175
	Dakota Gasification Co	Beulah, ND	350
	Dyno Nobel Inc.	Cheyenne, WY	111
	Dyno Nobel Inc.	St. Helens, OR	104
	Iowa Fertilizer Co. (OCI Group)	Wever, IA	1,122
	Koch Industries Inc.	Beatrice, NE	183
	Koch Industries Inc.	Dodge City, KS	100
	Koch Industries Inc.	Enid, OK	1,368
	Koch Industries Inc.	Fort Dodge, OA	304
	LSB Industries	Pryor, OK	83
	LSB Industries	Cherokee, AL	220
Total US			12,886
Total Canada and US			17,140
Total Trinidad and Tobago			680
	Nutrien	Point Lisas	

(1) Capacities for Nutrien are based on internal calculation method.
Source: CRU Urea Market Outlook 2022 Capacity Database

INDUSTRY PARTICIPANTS – NORTH AMERICA

2021 Phosphoric Acid Plant Capacities⁽¹⁾ and Locations

('000 tonnes of P₂O₅ per year)

	Company	Site	Capacity
US	Nutrien	Aurora, NC	1,200
	Nutrien	White Springs, FL	540
	Itafos	Conda, ID	350
	J.R. Simplot Company	Pocatello, ID	460
	J.R. Simplot Company	Rock Springs, WY	370
	Mosaic Company	Bartow, FL	1,100
	Mosaic Company	New Wales, FL	1,720
	Mosaic Company	Tampa, FL	880
	Mosaic Company	Uncle Sam, LA	800
Total US			7,420

2021 DAP/MAP Plant Capacities and Locations

('000 tonnes of DAP/MAP per year)

	Company	Site	Capacity
US	Nutrien	Aurora, NC	800
	Nutrien	White Springs, FL	765
	Itafos	Conda, ID	350
	J.R. Simplot Company	Pocatello, ID	420
	J.R. Simplot Company	Rock Springs, WY	350
	Mosaic Company	Bartow, FL	1,680
	Mosaic Company	New Wales, FL	2,820
	Mosaic Company	Tampa, FL	1,200
	Mosaic Company	Faustina, LA	960
Total US			9,345

Note: The scientific and technical information with respect to Nutrien's potash operations on page 10, 12 and 16 of this Fact Book has been reviewed and approved by Craig Funk, Director, GeoSciences & Land of Nutrien who is a qualified person within the meaning of NI 43-101.

(1) Capacities figures are on a P₂O₅ basis. Capacities for Nutrien are based on internal calculation method.

Source: CRU Phosphate Fertilizer Market Outlook February 2022 Capacity Database

FERTILIZER STATISTICS

Fertilizer Consumption by Region

('000 tonnes nutrient)

Forecast Consumption 2021 Fertilizer Year

Region ⁽¹⁾	N	P	K	Total NPK	% share of world consumption NPK
Western and Central Europe	11,226	2,930	3,156	17,312	9%
Eastern Europe and Central Asia	7,342	2,102	1,643	11,087	6%
North America	14,768	5,598	5,364	25,730	13%
Latin America and the Caribbean	10,956	8,747	9,114	28,817	14%
Africa	4,544	2,146	947	7,637	4%
West Asia	3,269	1,156	385	4,810	2%
South Asia	24,324	10,987	3,383	38,694	19%
East Asia	32,324	14,995	14,617	61,936	31%
Oceania	2,017	1,320	524	3,861	2%
World	110,768	49,981	39,132	199,882	

(1) See Constants and Conversions for IFA Regional Classifications.

Source: IFA 2021-2025 Medium-Term Outlooks, July 2021

Fertilizer Consumption by Country

('000 tonnes nutrient per year)

Consumption Estimated 2021 - Top Ten

Rank	N		P		K		Total NPK
1	China	25,170	China	10,171	China	10,450	China 45,791
2	India	18,700	Brazil	7,481	Brazil	7,186	India 28,517
3	United States	11,606	India	6,817	United States	5,293	United States 21,344
4	Brazil	4,963	United States	4,445	India	3,000	Brazil 19,631
5	Pakistan	3,719	Pakistan	1,411	Indonesia	2,087	Indonesia 6,791
6	Indonesia	3,434	Indonesia	1,270	Malaysia	1,268	Pakistan 5,196
7	Russia	2,830	Canada	1,198	Poland	640	Canada 4,488
8	Canada	2,800	Australia	1,141	Vietnam	608	Russia 4,097
9	Ukraine	2,375	Vietnam	893	Thailand	556	Australia 3,246
10	France	1,990	Russia	796	Canada	490	Ukraine 3,183
Top 10		77,587		35,623		31,578	142,284
World		110,768		49,981		39,132	199,882

Sources: IFA 2021-2025 Medium Term Outlooks, July 2021

CRU Urea Fertilizer Market Outlook February 2022, CRU Potassium Chloride Market Outlook February 2022,

CRU Phosphate Fertilizer Market Outlook February 2022

Fertilizer Capacity by Region

('000 tonnes nutrient per year)

Capacity Estimated 2021

Region	N	P	K	Total NPK	% share of world capacity NPK
Western Europe	9,901	565	3,955	14,421	5%
Central Europe	5,809	796	-	6,605	2%
Eastern Europe & Central Asia	26,354	5,566	22,025	53,945	17%
North America	18,492	7,199	23,413	49,104	16%
Latin America	9,292	2,692	2,270	14,254	5%
Africa	10,871	11,358	-	22,229	7%
West Asia	17,116	5,492	4,025	26,633	9%
South Asia	19,912	2,144	65	22,121	7%
East Asia	66,779	22,744	8,253	97,776	32%
Oceania	1,838	600	175	2,613	1%
World	186,364	59,156	64,181	309,701	100%

Sources: IFA World Potash Capacities 2020, July 2020

IFA World Processed Phosphates Capacities 2020, August 2020

IFA World Ammonia Capacities 2020, July 2021

FERTILIZER STATISTICS

Global Fertilizer Capacity by Country

('000 tonnes nutrient per year)

Capacity Estimated 2021 - Top Ten

Rank	N		P		K		Total NPK	
1	China	55,255	China	21,202	Canada	22,325	China	83,810
2	Russia	17,498	Morocco	7,460	Russia	11,400	Russia	33,102
3	India	14,509	United States	7,199	Belarus	9,425	Canada	26,742
4	United States	14,075	Russia	4,204	China	7,353	United States	22,362
5	Indonesia	6,788	Saudi Arabia	2,880	Germany	3,100	India	16,637
6	Iran	4,810	India	2,063	Israel	2,500	Belarus	10,534
7	Trinidad & Tobago	4,737	Tunisia	1,893	Chile	1,735	Morocco	7,460
8	Saudi Arabia	4,533	Brazil	1,630	Jordan	1,525	Saudi Arabia	7,413
9	Egypt	4,481	Jordan	1,065	United States	1,088	Indonesia	7,388
10	Canada	4,417	Mexico	862	Laos	900	Germany	5,756
Top 10		131,103		50,458		61,351		221,204
World		186,364		59,156		64,181		309,701

Source: IFA World Potash Capacities 2020, July 2020

IFA World Processed Phosphates Capacities 2020, August 2020

IFA World Ammonia Capacities 2020, July 2021

Potash: Imports/Exports

('000 tonnes per year of KCl)

Total Exports					Top Three Destinations (2021)		
Rank	Exporting Regions	2021	2020	2019	1 st	2 nd	3 rd
1	Canada	22,052	22,456	19,247	United States	Brazil	China
2	Belarus	12,270	11,759	10,539	Brazil	China	India
3	Russia	10,945	10,813	9,542	Brazil	China	United States
4	Israel	3,422	3,620	3,052	Brazil	China	United States
5	Germany	3,202	3,167	2,874	Brazil	Belgium	Poland
6	Jordan	2,370	2,334	2,144	India	China	Indonesia
7	Laos	820	740	689	China	Indonesia	Vietnam
8	Chile	623	559	383	Brazil	South Africa	Mexico
9	Spain	403	395	595	France	Netherlands	UK
10	Uzbekistan	249	178	168	Ukraine	China	Japan
Total	Top 10	56,355	56,021	49,234			
Total	World	56,420	56,053	49,274			

Total Imports					Top Three Sources (2021)		
Rank	Importing Regions	2021	2020	2019	1 st	2 nd	3 rd
1	Brazil	12,554	10,946	10,201	Canada	Russia	Belarus
2	United States	10,346	9,508	7,917	Canada	Russia	Belarus
3	China	7,456	8,588	8,961	Canada	Russia	Belarus
4	Indonesia	4,265	3,038	2,773	Canada	Belarus	Russia
5	India	3,076	5,147	4,035	Belarus	Canada	Jordan
6	Malaysia	1,775	1,345	1,093	Canada	Belarus	Russia
7	Vietnam	1,138	1,164	890	Russia	Belarus	Israel
8	Belgium	1,104	966	976	Canada	Belarus	Germany
9	Thailand	988	739	660	Canada	Belarus	Israel
10	Poland	923	1,095	901	Belarus	Germany	Russia
Total	Top 10	43,625	42,536	38,407			
Total	World	56,420	56,053	49,274			

Source: CRU, IFA Potash Statistics Annual Detailed Report

FERTILIZER STATISTICS

Ammonia: Imports/Exports

('000 tonnes per year of ammonia)

Total Exports					Top Three Destinations (2021)		
Rank	Exporting Regions	2021	2020	2019	1 st	2 nd	3 rd
1	Russia	4,404	4,183	4,662	Morocco	India	Belgium
2	Trinidad	3,904	3,975	4,546	United States	Morocco	Mexico
3	Indonesia	1,661	1,616	1,783	South Korea	China	Taiwan
4	Saudi Arabia	1,523	1,898	1,619	India	South Korea	China
5	Algeria	1,300	920	1,221	Turkey	Spain	Brazil
6	Canada	1,196	1,071	955	United States	-	-
7	Qatar	700	617	767	India	Turkey	Jordan
8	Egypt	550	454	651	India	South Korea	Bulgaria
9	Iran	450	427	332	India	Taiwan	China
10	Germany	380	372	309	Czech Republic	Belgium	France
Total	Top 10	16,068	15,533	16,846			
Total	World	18,747	18,418	19,823			

Total Imports					Top Three Sources (2021)		
Rank	Importing Regions	2021	2020	2019	1 st	2 nd	3 rd
1	United States	2,531	2,388	2,499	Trinidad	Canada	Saudi Arabia
2	India	2,510	2,565	2,791	Russia	Saudi Arabia	Qatar
3	Morocco	1,553	1,855	1,538	Russia	Trinidad	Algeria
4	South Korea	1,289	1,199	1,323	Saudi Arabia	Indonesia	Malaysia
5	Belgium	1,005	774	995	Russia	Trinidad	Germany
6	Turkey	856	1,185	1,034	Russia	Algeria	Qatar
7	China	834	934	1,055	Indonesia	Saudi Arabia	Iran
8	Mexico	696	638	800	Trinidad	United States	Bulgaria
9	Norway	656	538	495	Russia	United Kingdom	Trinidad
10	Taiwan	640	563	592	Indonesia	Iran	Saudi Arabia
Total	Top 10	12,570	12,639	13,123			
Total	World	18,747	18,418	19,823			

Source: CRU, IFA Ammonia Statistics Annual Detailed Report

FERTILIZER STATISTICS

Urea: Imports/Exports

('000 tonnes per year of urea)

Total Exports					Top Three Destinations (2021)		
Rank	Exporting Regions	2021	2020	2019	1 st	2 nd	3 rd
1	Russia	7,281	8,106	6,976	Brazil	Mexico	Canada
2	Qatar	6,080	5,640	5,500	United States	Brazil	Thailand
3	China	5,300	5,451	4,683	India	South Korea	Mexico
4	Saudi Arabia	5,174	4,471	4,209	United States	Thailand	Australia
5	Egypt	4,449	4,615	4,684	Brazil	Turkey	Argentina
6	Algeria	3,409	3,342	2,919	Brazil	Argentina	France
7	Oman	3,253	3,180	3,239	India	Brazil	United States
8	Indonesia	3,148	3,214	1,876	United States	India	Philippines
9	United Arab Emirates	2,180	2,082	1,909	Australia	India	Ethiopia
10	Iran	1,549	986	2,950	Turkey	Brazil	Iraq
Total	Top 10	41,823	41,087	38,945			
Total	World	52,197	51,534	50,393			

Total Imports					Top Three Sources (2021)		
Rank	Importing Regions	2021	2020	2019	1 st	2 nd	3 rd
1	Brazil	7,837	6,888	5,918	Qatar	Algeria	Russia
2	India	6,965	10,146	9,680	Oman	China	Ukraine
3	United States	5,620	4,257	4,883	Qatar	Saudi Arabia	Indonesia
4	Australia	2,492	2,254	1,883	Saudi Arabia	United Arab Emirates	Malaysia
5	Thailand	2,477	2,316	2,604	Saudi Arabia	Qatar	Malaysia
6	Turkey	2,468	2,437	2,669	Iran	Egypt	China
7	Mexico	1,744	1,829	1,509	Russia	China	Algeria
8	Argentina	1,151	1,232	773	Egypt	Algeria	China
9	Philippines	1,009	1,046	837	Indonesia	Malaysia	Qatar
10	France	976	897	1,107	Egypt	Algeria	Netherlands
Total	Top 10	32,740	33,302	31,862			
Total	World	52,197	51,534	50,393			

Source: CRU, IFA Urea Statistics Annual Detailed Report

FERTILIZER STATISTICS

Phosphate: Imports/Exports

('000 tonnes per year of DAP/MAP)

MAP and DAP

Total Exports					Top Three Destinations (2021)		
Rank	Exporting Regions	2021	2020	2019	1 st	2 nd	3 rd
1	China	10,052	7,943	8,621	Brazil	India	Pakistan
2	Morocco	6,549	8,150	6,074	Brazil	India	Canada
3	Saudi Arabia	4,475	4,857	4,813	India	United States	Brazil
4	Russia	3,806	3,456	3,425	Brazil	United States	Argentina
5	United States	2,219	3,263	3,941	Canada	Brazil	Mexico
6	Jordan	899	767	634	United States	India	Brazil
7	Australia	584	459	353	United States	Pakistan	Brazil
8	Mexico	572	585	594	United States	Canada	Guatemala
9	Kazakhstan	410	318	353	Uzbekistan	Ukraine	Russia
10	Lithuania	368	537	645	Ukraine	United States	France
Total	Top 10	29,935	30,334	29,452			
Total	World	31,304	31,542	30,097			

Total Imports					Top Three Sources (2021)		
Rank	Importing Regions	2021	2020	2019	1 st	2 nd	3 rd
1	Brazil	6,306	5,510	4,604	Morocco	China	Russia
2	India	4,656	6,598	6,096	China	Saudi Arabia	Morocco
3	United States	2,721	1,811	2,886	Saudi Arabia	Jordan	Mexico
4	Canada	1,756	1,510	1,165	United States	Morocco	Russia
5	Pakistan	1,478	1,227	1,393	China	Saudi Arabia	Australia
6	Argentina	1,396	1,474	1,360	China	Morocco	Russia
7	Bangladesh	1,370	1,287	613	China	Saudi Arabia	Morocco
8	Australia	1,331	1,230	1,161	China	Saudi Arabia	United States
9	Thailand	709	613	581	China	Russia	Australia
10	Vietnam	680	671	587	China	Russia	South Korea
Total	Top 10	22,402	21,931	20,444			
Total	World	31,304	31,542	30,097			

Source: CRU, IFA Processed Phosphates Statistics Annual Detailed Report

FERTILIZER STATISTICS

Global Nutrient Consumption

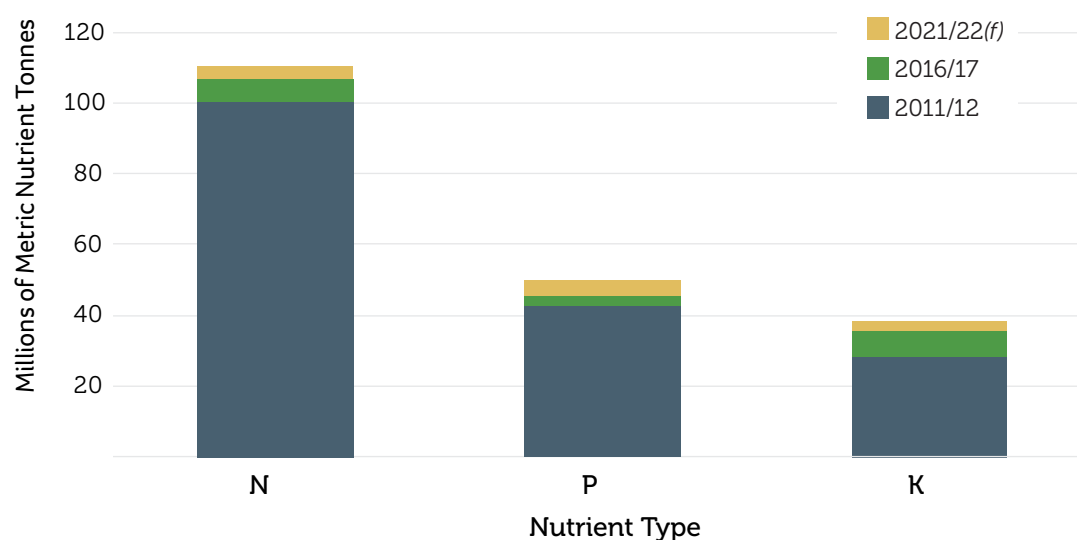
('000 tonnes nutrient per year. Does not include industrial use.)

	2021/22f	2020/21	2019/20	2018/19	2017/18	2016/17	2015/16	2014/15	2013/14	2012/13	2011/12	2010/11
N	110,768	110,037	105,707	104,089	105,867	107,208	105,802	103,105	104,083	101,194	100,526	96,978
Growth	0.6%	4.1%	1.5%	-1.7%	-1.2%	1.3%	2.6%	-0.9%	2.8%	0.6%	3.6%	1.3%
P	49,981	49,600	46,336	45,519	46,273	45,417	45,262	44,570	44,998	43,690	42,917	42,420
Growth	0.8%	7.0%	1.8%	-1.6%	1.9%	0.3%	1.5%	-0.9%	2.9%	1.80%	1.17%	6.3%
K	39,132	38,542	36,294	37,508	37,607	36,008	33,099	34,607	31,553	29,588	29,039	28,191
Growth	1.5%	6.2%	-3.2%	-0.3%	4.4%	8.8%	-4.3%	9.7%	6.6%	1.9%	3.0%	24.8%

Source: IFA Global Medium-Term Outlook for Fertilizers and Raw Materials: 2021- 2025, July 2021

Table: Medium-Term Fertilizer Consumption Forecasts by Region (Fertilizer Year)

Growth in Global Nutrient Consumption



2021 Global Potash Supply/Demand Balance

('000 tonnes per year of K₂O)

Region ⁽¹⁾	Capacity	Operational Capability	Non-Fertilizer Use	Fertilizer Demand	Total Demand
Western Europe	3,955	3,567	587	2,228	2,815
Central Europe	-	-	62	932	993
Eastern Europe & Central Asia	22,025	18,382	220	1,642	1,862
North America	23,413	18,044	1,360	5,286	6,646
Latin America	2,270	1,439	669	9,114	9,783
Africa	-	-	199	944	1,142
West Asia	4,025	4,025	137	365	503
South Asia	65	33	316	3,643	3,959
East Asia	8,041	6,846	2,489	14,625	17,114
Oceania	175	26	1	522	523
World	63,969	52,362	6,040	39,300	45,340

(1) See Constants and Conversions for IFA regional Classifications

Source: IFA Fertilizers and Raw Materials Global Supply 2021-2025, July 2021

FERTILIZER STATISTICS

2021 Global Nitrogenous Fertilizer Supply/Demand Balance

('000 tonnes per year of N)

Region ⁽¹⁾	Capacity	Operational Capability	Non-Fertilizer Use	Fertilizer Demand	Total Demand
Western Europe	9,901	9,545	5,179	7,836	13,015
Central Europe	5,811	4,549	993	3,427	4,420
Eastern Europe & Central Asia	26,354	22,828	2,918	7,342	10,261
North America	18,492	18,051	6,378	14,733	21,111
Latin America	9,292	6,272	1,723	10,956	12,679
Africa	10,872	9,227	614	4,524	5,138
West Asia	17,116	15,375	965	3,286	4,251
South Asia	19,912	17,702	1,868	24,293	26,161
East Asia	66,778	53,718	22,432	32,347	54,780
Oceania	1,837	1,757	1,059	2,014	3,073
World	186,364	159,024	44,131	110,758	154,888

2021 Global Urea Supply/Demand Balance

('000 tonnes per year of N)

Region ⁽¹⁾	Capacity	Operational Capability	Non-Fertilizer Use	Fertilizer Demand	Total Demand
Western Europe	3,228	2,918	2,162	2,586	4,748
Central Europe	1,938	1,463	475	1,474	1,949
Eastern Europe & Central Asia	9,798	8,425	543	2,570	3,113
North America	7,682	7,219	1,417	8,103	9,520
Latin America	3,476	1,801	491	6,683	7,174
Africa	7,233	6,176	117	2,895	3,013
West Asia	11,677	11,114	562	2,576	3,138
South Asia	17,679	16,231	1,196	19,677	20,874
East Asia	38,441	33,577	8,894	22,185	31,078
Oceania	261	226	162	1,450	1,612
World	101,413	89,149	16,018	70,199	86,217

2021 Global Phosphoric Acid Supply/Demand Balance

('000 tonnes per year of P₂O₅)

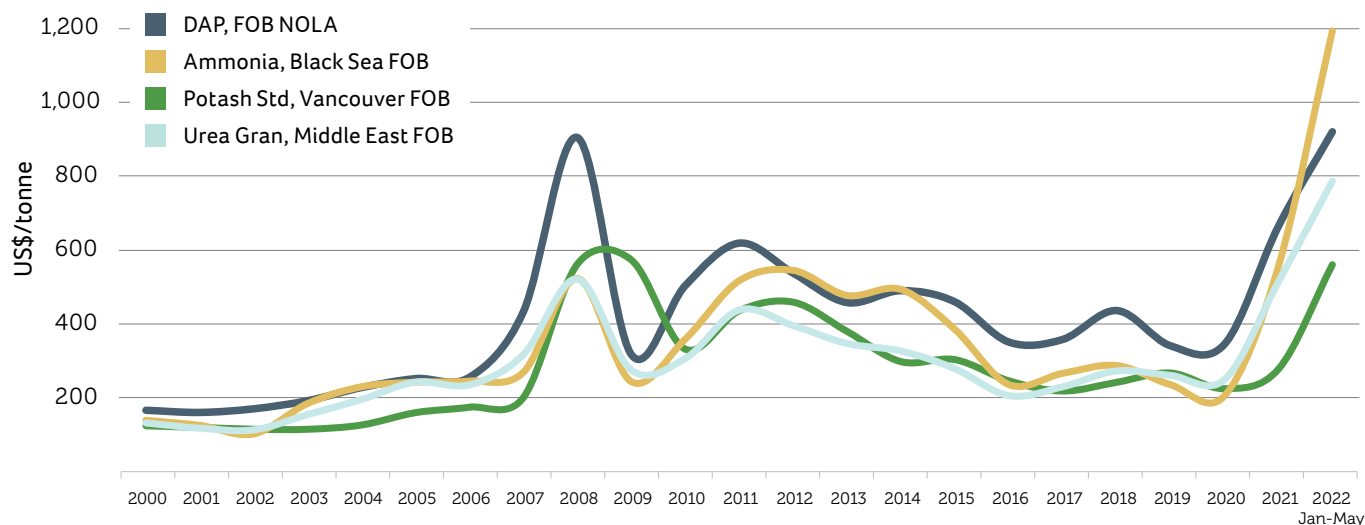
Region ⁽¹⁾	Capacity	Operational Capability	Non-Fertilizer Use	Fertilizer Demand	Total Demand
Western Europe	565	512	691	1,514	2,205
Central Europe	796	474	144	947	1,091
Eastern Europe & Central Asia	5,566	5,077	429	1,433	1,862
North America	7,599	7,219	904	5,525	6,429
Latin America	2,692	1,951	943	7,347	8,290
Africa	11,508	9,746	803	1,709	2,512
West Asia	5,722	5,104	367	1,046	1,413
South Asia	2,144	1,798	293	9,515	9,808
East Asia	22,744	20,064	2,292	13,507	15,799
Oceania	600	480	17	855	872
World	59,936	52,424	6,884	43,397	50,281

(1) See Constants and Conversions for IFA regional Classifications

Source: IFA Fertilizers and Raw Materials Global Supply 2021-2025, July 2021

FERTILIZER STATISTICS

International Benchmark Fertilizer Prices – Historical



Source: Green Markets®, Fertilizer Week

Fertilizer and Energy Prices

(US\$/tonne, annual average)

Year	Gran KCl CFR Brazil	Gran KCl US Midwest	STD KCl SE Asia	STD KCl China	STD KCl India	Gran. Urea FOB Middle East	Gran Urea FOB Barge NOLA	Gran Urea W Canada	Ammonia FOB Yuzhnyy	Ammonia CFR Tampa	UAN FOB Midwest	DAP FOB Barge NOLA	Phos Acid CFR India	Liquid Sulfur CFR Tampa	Natural Gas NYMEX (US\$/Mmbtu)	Oil Brent (US\$/barrel)
1998	141	132	136	114	-	116	128	162	108	142	109	261	432	66	2.1	13
1999	145	132	135	114	-	94	104	150	84	112	94	255	416	69	2.3	18
2000	147	130	130	115	-	131	158	180	140	151	125	225	370	59	4.3	29
2001	140	130	129	115	121	117	149	209	119	178	160	199	349	38	4.0	24
2002	136	126	120	114	119	113	127	182	101	121	119	168	338	44	3.4	25
2003	143	129	130	119	121	154	190	256	183	190	158	187	341	65	5.5	29
2004	163	174	185	150	162	195	225	282	228	255	191	228	384	66	5.9	38
2005	216	228	218	212	210	242	284	323	243	289	234	253	426	66	8.7	55
2006	199	223	221	220	220	235	255	385	245	339	214	256	454	67	6.7	65
2007	273	286	293	235	249	317	381	431	269	325	322	432	533	73	7.0	72
2008	775	804	836	508	540	522	557	653	532	462	468	915	1714	359	8.9	97
2009	635	641	625	587	523	275	303	443	245	429	235	323	619	21	3.9	62
2010	399	462	402	350	382	307	347	437	357	408	296	509	742	118	4.4	80
2011	521	606	493	435	417	438	471	532	518	575	411	617	994	208	4.0	111
2012	513	567	511	470	480	437	523	611	546	605	408	539	909	175	2.8	112
2013	404	466	408	400	424	345	376	496	476	543	361	456	715	123	3.7	109
2014	350	426	321	310	335	334	392	487	492	545	353	489	715	126	4.4	99
2015	325	393	317	313	329	279	317	414	384	454	322	458	799	131	2.6	52
2016	232	263	247	269	277	207	228	351	234	276	225	349	626	76	2.5	44
2017	263	277	241	224	232	217	228	342	265	277	206	356	566	79	3.0	54
2018	320	310	279	246	257	264	285	360	286	312	237	435	732	122	3.2	71
2019	330	333	294	290	288	248	270	375	234	247	206	339	691	84	2.6	64
2020	238	280	245	243	248	235	250	346	204	233	164	343	628	53	2.1	43
2021	534	565	389	244	290	495	536	568	555	595	374	664	1073	166	3.8	71
2022 (Jan-May)	967	848	741	482	544	730	757	954	1194	1281	627	920	1530	355	5.5	101

Sources: CRU Fertilizer Week, Bloomberg, Blue, Johnson & Associates, Nutrien

FERTILIZER STATISTICS

Total Consumption of Fertilizers – North America

('000 tonnes nutrient per year)

	N	P ₂ O ₅	K ₂ O	Total
US				
2020/2021	11,320	4,649	4,908	20,877
2019/2020	10,774	4,285	4,986	20,045
2018/2019 (a)	11,549	3,978	4,268	19,795
2017/2018	11,967	4,327	4,738	21,032
2016/2017	11,879	4,213	4,825	20,917
2015/2016	11,684	3,920	4,472	20,076
2014/2015	11,809	3,871	4,273	19,953
2013/2014	12,212	4,339	4,819	21,370
2012/2013	12,188	4,289	4,385	20,862
2011/2012	12,231	3,946	4,186	20,363
Canada				
2020/2021	2,934	1,127	885	4,946
2019/2020	2,876	1,207	729	4,812
2018/2019 (b)	2,660	1,144	574	4,378
2017/2018	2,614	1,080	419	4,113
2016/2017	2,390	947	418	3,755
2015/2016	2,537	1,025	374	3,936
2014/2015	2,570	945	394	3,909
2013/2014	2,472	885	373	3,730
2012/2013	2,507	836	361	3,704
2011/2012	2,312	799	302	3,413

(a) estimated via AAPFCO Commercial Fertilizers Report and IFA data and Nutrien estimates

(b) potash values estimated via CRU fiscal year estimates

Source(1965-2014): IFADATA

Source(2014/2015- 2020/2021): Stats Canada Table: 32-10-0039-01 (formerly: CANSIM Table 001-0069)

Total Shipments of Fertilizers and Plant Nutrients – Canada^(1, 2)

('000 tonnes nutrient per year)

	N	Primary Nutrient Shipments P ₂ O ₅	K ₂ O ⁽¹⁾	Total
Western Canada				
2020/2021	2,465	875	355	3,695
2019/2020	2,366	975	316	3,657
2018/2019	2,255	915	258	3,428
2017/2018	2,210	839	209	3,258
2016/2017	2,032	716	193	2,941
2015/2016	2,132	775	183	3,090
2014/2015	2,238	756	206	3,200
2013/2014	2,103	700	173	2,976
2012/2013	2,126	649	174	2,949
2011/2012	1,940	601	145	2,686
Eastern Canada				
2020/2021	469	252	530	1,251
2019/2020	510	232	412	1,154
2018/2019	405	229	316	950
2017/2018	403	240	210	853
2016/2017	358	231	225	814
2015/2016	405	249	191	845
2014/2015	350	189	193	732
2013/2014	369	182	194	745
2012/2013	379	168	179	726
2011/2012	372	198	157	727

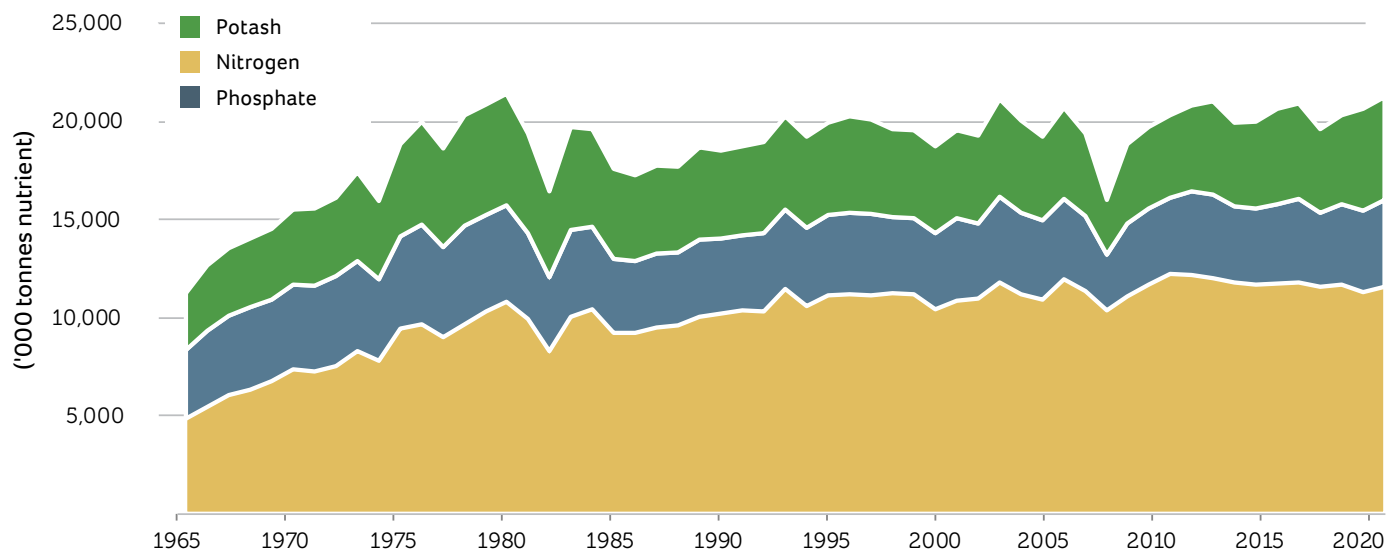
(1) 2011/2012 to 2020/2021 data are derived from fertilizer shipments to Canadian agriculture markets reports.

(2) 2018/19 potash values are estimated based on CRU fiscal year data and historical ratios, due to data unavailability from StatsCanada

Source(2006/2007- 2020/2021): Stats Canada Table: 32-10-0039-01 (formerly: CANSIM Table 001-0069)

FERTILIZER STATISTICS

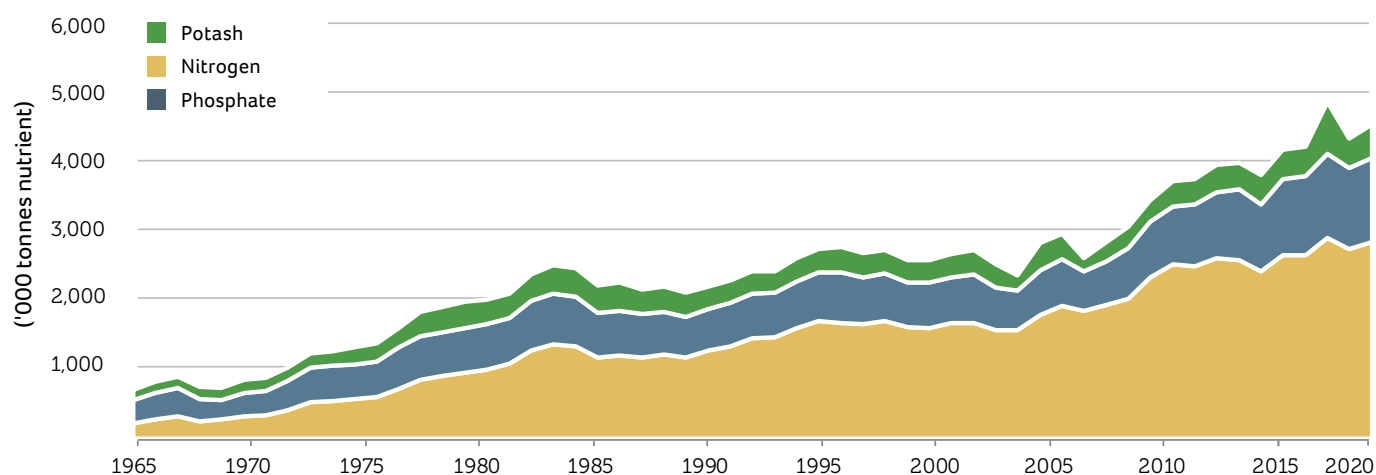
Fertilizer Consumption – US



Source (1965-2019): IFADATA

Source (2020- 2021e): CRU Urea Fertilizer Market Outlook February 2022, CRU Potassium Chloride Market Outlook February 2022, CRU Phosphate Fertilizer Market Outlook February 2022

Fertilizer Consumption – Canada



Source (1965-2019): IFADATA

Source (2020- 2021e): CRU Urea Fertilizer Market Outlook February 2022, CRU Potassium Chloride Market Outlook February 2022, CRU Phosphate Fertilizer Market Outlook February 2022

FERTILIZER STATISTICS

Fertilizer Consumption – Europe

('000 tonnes nutrient per year. Includes West, Central and Eastern Europe)

Primary Nutrient Consumption				
	N	P ₂ O ₅	K ₂ O	Total
France				
2021 (e)	2,050	362	454	2,866
2020	2,105	360	446	2,911
2019	2,126	416	453	2,995
2018	2,168	433	458	3,059
2017	2,243	427	444	3,114
2016	2,241	359	390	2,990
2015	2,212	429	370	3,011
2014	2,195	409	456	3,059
Germany				
2021 (e)	1,169	208	431	1,808
2020	1,201	213	441	1,855
2019	1,373	248	420	2,040
2018	1,342	201	410	1,953
2017	1,497	209	392	2,097
2016	1,658	231	430	2,319
2015	1,713	288	398	2,398
2014	1,822	301	460	2,584
Poland				
2021 (e)	1,130	297	640	2,067
2020	1,104	291	588	1,983
2019	1,046	346	569	1,961
2018	994	344	568	1,906
2017	1,179	339	559	2,077
2016	1,152	344	557	2,052
2015	1,043	326	527	1,896
2014	1,004	304	485	1,793
Russia				
2021 (e)	2,820	796	471	4,087
2020	2,732	754	462	3,948
2019	2,532	966	581	4,079
2018	2,203	809	534	3,547
2017	1,907	792	434	3,133
2016	2,149	691	318	3,159
2015	1,807	552	294	2,653
2014	1,472	542	300	2,313
Spain				
2021 (e)	1,051	449	420	1,920
2020	1,052	485	426	1,963
2019	1,074	499	395	1,968
2018	1,054	449	378	1,882
2017	1,090	427	414	1,931
2016	1,019	432	390	1,841
2015	987	388	372	1,747
2014	1,014	403	365	1,782
United Kingdom				
2021 (e)	958	155	216	1,329
2020	945	149	208	1,302
2019	967	174	252	1,393
2018	1,038	186	267	1,491
2017	1,033	188	262	1,483
2016	1,041	195	276	1,512
2015	1,026	197	270	1,493
2014	1,049	194	272	1,515

Fertilizer Consumption – Latin America

('000 tonnes nutrient per year)

Primary Nutrient Consumption				
	N	P ₂ O ₅	K ₂ O	Total
Argentina				
2021 (e)	1,592	739	70	2,401
2020	1,441	708	60	2,209
2019	1,272	745	45	2,062
2018	1,154	681	47	1,882
2017	970	630	47	1,647
2016	992	758	67	1,817
2015	602	443	49	1,094
2014	811	590	72	1,472
Brazil				
2021 (e)	4,963	7,481	7,186	19,630
2020	4,719	6,511	6,533	17,763
2019	4,358	5,417	6,102	15,877
2018	4,287	5,157	6,064	15,507
2017	4,377	5,126	5,853	15,356
2016	4,366	4,974	5,728	15,068
2015	3,533	4,401	5,162	13,096
2014	3,872	4,752	5,395	14,019
Chile				
2021 (e)	268	151	139	558
2020	266	147	119	532
2019	218	129	101	448
2018	213	133	101	447
2017	194	151	96	441
2016	198	130	98	426
2015	196	125	97	418
2014	195	129	101	425
Mexico				
2021 (e)	1,664	548	331	2,543
2020	1,541	542	352	2,435
2019	1,427	393	221	2,041
2018	1,467	506	289	2,262
2017	1,548	476	275	2,299
2016	1,561	454	225	2,240
2015	1,372	383	247	2,002
2014	1,565	370	209	2,144

(e) Estimate

Source (2020-2021e): CRU Urea Fertilizer Market Outlook February 2022, CRU Potassium Chloride Market Outlook February 2022, CRU Phosphate Fertilizer Market Outlook February 2022

Source: IFADATA (2009-2019)

FERTILIZER STATISTICS

Fertilizer Consumption – Africa and the Middle East

('000 tonnes nutrient per year)

Primary Nutrient Consumption				
	N	P ₂ O ₅	K ₂ O	Total
Egypt				
2021 (e)	1,288	339	108	1,735
2020	1,271	329	108	1,708
2019	1,294	292	106	1,692
2018	1,334	222	62	1,618
2017	1,315	263	62	1,640
2016	1,282	229	60	1,570
2015	1,221	333	63	1,616
2014	1,125	257	53	1,434
Iran				
2021 (e)	1,186	123	39	1,348
2020	1,160	123	33	1,316
2019	952	137	89	1,177
2018	959	97	32	1,089
2017	910	139	67	1,116
2016	859	50	89	997
2015	594	102	31	726
2014	822	174	41	1,036
Morocco				
2021 (e)	145	222	80	447
2020	218	219	81	518
2019	186	121	82	388
2018	212	132	90	434
2017	251	158	32	442
2016	188	150	38	376
2015	196	227	34	457
2014	220	225	29	474
Nigeria				
2021 (e)	535	155	113	803
2020	500	143	119	762
2019	355	27	18	400
2018	436	136	114	686
2017	453	145	136	734
2016	265	98	59	422
2015	185	57	25	267
2014	260	68	62	390
South Africa				
2021 (e)	451	389	172	1,012
2020	448	329	174	951
2019	382	246	134	762
2018	381	249	132	762
2017	470	268	136	874
2016	327	235	125	687
2015	357	263	132	752
2014	395	264	136	795

Fertilizer Consumption – Asia

('000 tonnes nutrient per year)

Primary Nutrient Consumption				
	N	P ₂ O ₅	K ₂ O	Total
China				
2021 (e)	25,170	10,171	10,450	45,791
2020	25,164	10,024	10,315	45,503
2019	24,110	11,178	10,111	45,399
2018	24,376	12,029	9,344	45,749
2017	24,581	12,100	10,151	46,832
2016	26,522	12,682	9,911	49,115
2015	29,306	13,973	10,018	53,297
2014	27,831	14,163	8,169	50,163
India				
2021 (e)	18,699	6,817	3,000	28,516
2020	20,276	7,770	2,964	31,010
2019	19,101	7,662	2,607	29,370
2018	17,638	6,910	2,680	27,228
2017	16,959	6,854	2,780	26,593
2016	16,735	6,705	2,508	25,949
2015	17,372	6,979	2,402	26,753
2014	16,950	6,099	2,533	25,581
Indonesia				
2021 (e)	3,434	1,270	2,087	6,791
2020	3,334	1,224	1,797	6,355
2019	3,476	1,284	1,604	6,363
2018	3,554	1,358	2,290	7,202
2017	3,510	1,418	2,006	6,934
2016	3,255	1,022	1,600	5,877
2015	3,532	1,260	1,635	6,427
2014	3,209	1,164	1,771	6,144
Pakistan				
2021 (e)	3,719	1,411	67	5,197
2020	3,506	1,258	55	4,819
2019	3,415	1,084	50	4,549
2018	3,408	1,153	53	4,615
2017	3,435	1,279	50	4,763
2016	3,730	1,269	41	5,040
2015	2,672	1,007	20	3,700
2014	3,313	975	33	4,321
Vietnam				
2021 (e)	1,497	893	608	2,998
2020	1,477	796	562	2,835
2019	1,475	742	558	2,775
2018	1,610	821	508	2,940
2017	1,646	798	622	3,066
2016	1,597	767	670	3,034
2015	1,795	821	522	3,137
2014	1,421	723	624	2,769

(e) Estimate

Source (2020-2021e): CRU Urea Fertilizer Market Outlook February 2022, CRU Potassium Chloride Market Outlook February 2022, CRU Phosphate Fertilizer Market Outlook February 2022

Source: IFADATA (2009-2019)

FERTILIZER STATISTICS

Fertilizer Consumption – Oceania

('000 tonnes nutrient per year)

Primary Nutrient Consumption				
	N	P ₂ O ₅	K ₂ O	Total
Australia				
2021 (e)	1,801	1,141	304	3,246
2020	1,659	1,107	291	3,057
2019	1,324	923	281	2,527
2018	1,242	910	281	2,433
2017	1,534	999	277	2,811
2016	1,514	880	254	2,647
2015	1,347	953	248	2,548
2014	1,407	909	250	2,566
New Zealand				
2021 (e)	448	343	130	921
2020	436	342	128	906
2019	470	338	148	956
2018	451	352	158	961
2017	458	339	155	952
2016	443	313	147	904
2015	427	318	131	877
2014	428	357	132	916

(e) Estimate

Source (2020-2021e): CRU Urea Fertilizer Market Outlook February 2022, CRU Potassium Chloride Market Outlook February 2022, CRU Phosphate Fertilizer Market Outlook February 2022

Source: IFADATA (2009-2019)

Fertilizer Application Rates – US⁽¹⁾

(years ended June 30)

		N	P	K	Total
Corn					
	lbs/acre	149	69	87	
	% of area applied	98%	79%	63%	
	lbs applied/acre	146	55	55	255
Cotton					
	lbs/acre	103	42	73	
	% of area applied	86%	61%	48%	
	lbs applied/acre	89	26	35	149
Soybeans					
	lbs/acre	17	55	89	
	% of area applied	32%	42%	44%	
	lbs applied/acre	5	23	39	68
Spring Wheat					
	lbs/acre	102	39	25	
(excl. durum)	% of area applied	97%	89%	31%	
	lbs applied/acre	99	35	8	141
Winter Wheat					
	lbs/acre	73	31	46	
	% of area applied	88%	63%	15%	
	lbs applied/acre	64	20	7	91

(1) Corn data is for the year 2018, Soybean data is for the year 2020. Cotton, Spring Wheat and Winter Wheat data are for the year 2019.

Source: USDA NASS Agricultural Chemical Use Survey - 2018 Corn, May 2019
USDA NASS Agricultural Chemical Use Survey - 2020 Soybeans, May 2021
USDA NASS Agricultural Chemical Use Survey - 2019 Wheat, May 2020
USDA NASS Agricultural Chemical Use Survey - 2019 Cotton, May 2020

(f) Forecast

(e) Estimate

(1) Total nutrient taken up by the crop.

(2) Nutrient removed in harvested portion of the crop. Corn removal includes corn stover harvest

Fertilizer Application Rates – Australia

		N	P	K	Total
Wheat					
% Total Fertilizer Use		37%	39%	18%	
Quantity	000 tonnes nutrient	367	317	30	714
Area Harvested	000 ha	13,963	13,963	13,963	
Application Rate	kg/ha	26	23	2	
Other Coarse Grains					
% Total Fertilizer Use		16%	15%	10%	
Quantity	000 tonnes nutrient	162	126	16	304
Area Harvested	000 ha	5,972	5,972	5,972	
Application Rate	kg/ha	27	21	3	
Sugar					
% Total Fertilizer Use		6%	3%	14%	
Quantity	000 tonnes nutrient	61	17	16	94
Area Harvested	000 ha	370	370	370	
Application Rate	kg/ha	165	46	44	
Cotton					
% Total Fertilizer Use		10%	3%	4%	
Quantity	000 tonnes nutrient	97	20	7	124
Area Harvested	000 ha	600	600	600	
Application Rate	kg/ha	162	33	12	

Source: IFA Assessment of Fertilizer Use by Crop, ABARES

Nutrient Uptake and Removal by Field Crops – US

(pounds per acre)

		N	P ₂ O ₅	K ₂ O
Corn				
176 bu/acre	Uptake	229	92	245
	Removal(a)	229	95	241
Cotton				
800 lb/acre	Uptake	96	34	67
	Removal	51	21	24
Soybeans				
50 bu/acre	Uptake	245	54	115
	Removal	190	42	65

Source: Nutrien Economics

a: Corn removal includes corn stover harvest

Nutrient Uptake and Removal by Field Crops – Western Canada

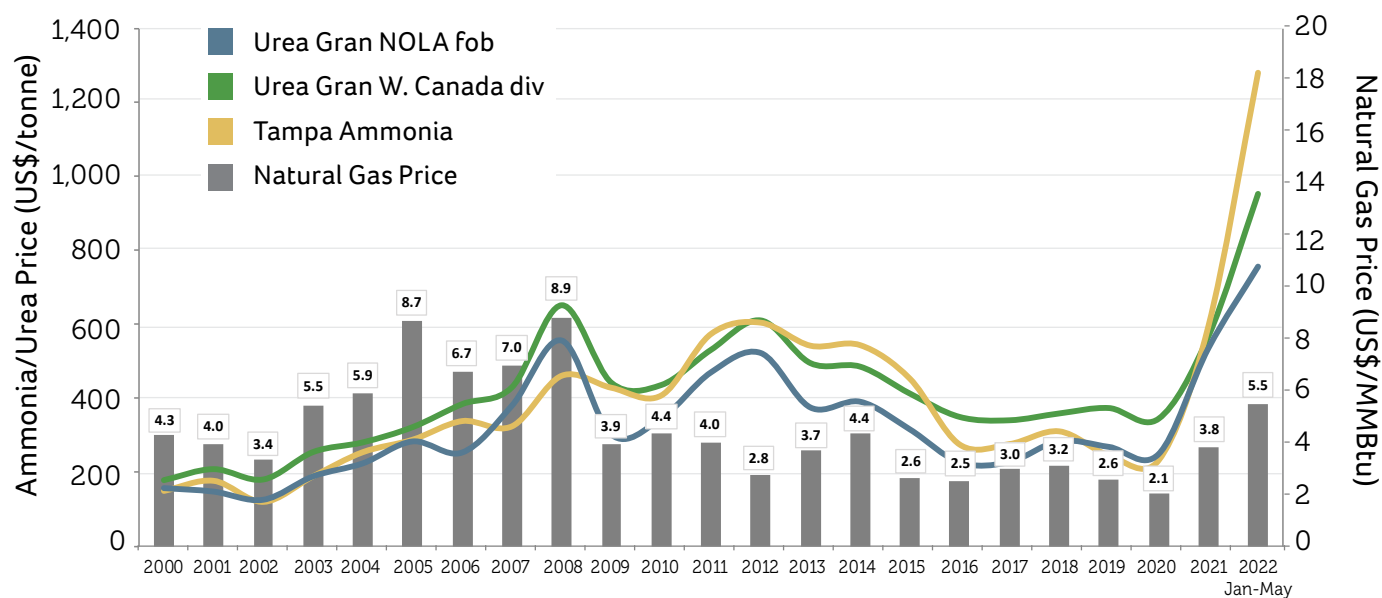
(pounds per acre)

		N	P ₂ O ₅	K ₂ O	S
Barley					
80 bu/acre	Uptake ⁽¹⁾	100–122	40–49	96–117	12–14
(3,360 kg/ha)	Removal ⁽²⁾	70–85	30–37	23–28	6–8
Canola					
35 bu/acre	Uptake	100–123	46–57	73–89	17–21
(1,960 kg/ha)	Removal	61–74	33–40	16–20	10–12
Flax					
24 bu/acre	Uptake	62–76	18–22	39–48	12–15
(1,492 kg/ha)	Removal	46–56	14–17	13–16	5–6
Spring Wheat					
40 bu/acre	Uptake	76–93	29–35	65–80	8–10
(2,690 kg/ha)	Removal	54–66	21–26	16–19	4–5

Source: IPNI

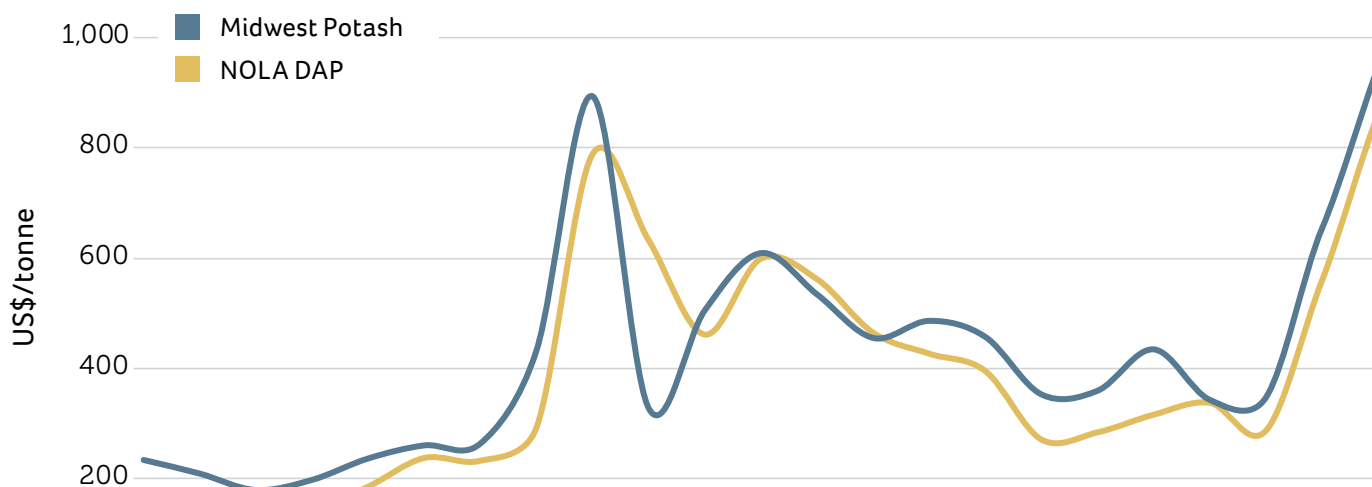
FERTILIZER STATISTICS

Historical Nitrogen Fertilizer and Gas Benchmark Prices – North America



Note: Fertilizer prices are all spot averages before any discounts, year average refers to calendar year
US Gulf port, New Orleans, Louisiana. Gas prices are Henry Hub Gulf Coast Natural Gas Spot Prices.
Source: US Energy Information Administration
CRU Fertilizer Week

Historical P & K Fertilizer Benchmark Prices – North America



Note: Fertilizer prices are all spot averages before any discounts, year average refers to calendar year.
Source: Green Markets

AGRICULTURE STATISTICS

Corn – US

Year	Planted Acres	Yield	Production	Domestic Consump.	Exports	Ending Stocks	Stocks/ Use Ratio	Avg. Price
	Mill Acres	Bu/Acre	Mill Bu	Mill Bu	Mill Bu	Mill Bu	%	US\$/Bu
2009/10	86.4	164.4	13,067	11,062	1,979	1,708	13%	3.55
2010/11	88.2	152.6	12,425	11,202	1,831	1,128	9%	5.18
2011/12	91.9	146.8	12,314	10,943	1,539	989	8%	6.22
2012/13	97.3	123.1	10,755	10,353	730	821	7%	6.89
2013/14	95.4	158.1	13,831	11,535	1,921	1,232	9%	4.46
2014/15	90.6	171.0	14,217	11,883	1,867	1,731	13%	3.70
2015/16	88.0	168.4	13,602	11,765	1,899	1,737	13%	3.61
2016/17	94.0	174.6	15,148	12,355	2,294	2,293	16%	3.36
2017/18	90.2	176.6	14,609	12,360	2,438	2,140	14%	3.36
2018/19	88.9	176.4	14,340	12,222	2,066	2,221	16%	3.61
2019/20	89.7	167.5	13,620	12,186	1,777	1,919	14%	3.56
2020/21	90.7	171.4	14,111	12,068	2,753	1,235	8%	4.53
2021/22(e)	93.4	177.0	15,115	12,435	2,500	1,440	10%	5.90
2022/23(f)	89.5	177.0	14,460	12,165	2,400	1,360	9%	6.75

Source: USDA

Cotton – US

Year	Planted Acres	Yield	Production	Domestic Consump.	Exports	Ending Stocks	Stocks/ Use Ratio	Avg. Price
	Mill Acres	LB/Acre	Mill Bales	Mill Bales	Mill Bales	Mill Bales	%	US¢/LB
2009/10	9.1	776	12.2	3.5	12.0	2.9	19%	65
2010/11	11.0	812	18.1	4.1	14.4	2.6	14%	85
2011/12	14.7	790	15.6	3.1	11.7	3.4	23%	94
2012/13	12.3	892	17.3	3.8	13.0	3.8	23%	76
2013/14	10.4	822	12.9	3.8	10.5	2.4	16%	84
2014/15	11.1	838	16.3	3.8	11.2	3.7	24%	66
2015/16	8.6	766	12.9	3.6	9.2	3.8	30%	65
2016/17	10.1	867	17.2	3.3	14.9	2.8	15%	71
2017/18	12.7	905	20.9	3.5	15.8	4.3	22%	72
2018/19	14.1	882	18.4	3.0	14.8	4.9	27%	70
2019/20	13.7	831	19.9	2.2	15.5	7.3	41%	60
2020/21	12.1	853	14.6	2.4	16.4	3.2	17%	66
2021/22(e)	11.2	819	17.5	2.6	14.8	3.4	20%	92
2022/23(f)	12.2	867	16.5	2.5	14.5	2.9	17%	90

Source: USDA

Soybeans – Brazil

Year	Harvested Acres	Yield	Production	Domestic Consump.	Exports	Ending Stocks	Stocks/ Use Ratio	Avg. Price
	Mill Acres	Bu/Acre	Mill Bu	Mill Bu	Mill Bu	Mill Bu	%	BRL/Sack
2009/10	58.1	43.7	2,535	1,326	1,050	753	32%	\$38
2010/11	59.8	46.3	2,767	1,425	1,101	996	39%	\$46
2011/12	61.8	39.6	2,443	1,491	1,332	621	22%	\$48
2012/13	68.4	44.0	3,013	1,388	1,540	720	25%	\$52
2013/14	74.4	42.8	3,186	1,450	1,721	758	24%	\$63
2014/15	79.3	45.1	3,572	1,583	1,860	898	26%	\$57
2015/16	82.3	43.1	3,546	1,558	1,998	902	25%	\$71
2016/17	83.7	50.3	4,211	1,582	2,320	1,220	31%	\$62
2017/18	86.8	51.6	4,483	1,708	2,799	1,203	27%	\$63
2018/19	88.6	49.4	4,376	1,649	2,741	1,191	27%	\$67
2019/20	91.2	51.7	4,722	1,815	3,385	735	14%	\$72
2020/21	96.1	52.8	5,071	1,816	3,000	1,080	22%	\$116
2021/22(e)	100.8	45.5	4,610	1,865	3,041	785	16%	\$165
2022/23(f)	103.8	52.8	5,475	1,914	3,253	1,121	22%	\$170

Source: USDA, CONAB, Bloomberg

(e) Estimate

(f) Forecast

Note: 2022/23(f) prices for Brazil and Australia are indexed to Chicago futures market

Soybeans – US

Planted Acres	Yield	Production	Domestic Consump.	Exports	Ending Stocks	Stocks/ Use Ratio	Avg. Price
Mill Acres	Bu/Acre	Mill Bu	Mill Bu	Mill Bu	Mill Bu	%	US\$/Bu
77.5	44	3,361	1,864	1,499	151	4%	9.59
77.4	43.5	3,331	1,777	1,505	215	7%	11.30
75.0	42	3,097	1,793	1,366	169	5%	12.50
77.2	40	3,042	1,784	1,328	141	5%	14.40
76.8	44	3,357	1,839	1,639	92	3%	13.00
83.3	47.5	3,928	2,021	1,842	191	5%	10.10
82.7	48	3,927	2,002	1,943	197	5%	8.95
83.5	51.9	4,296	2,047	2,166	302	7%	9.47
90.2	49.3	4,412	2,168	2,129	438	10%	9.33
89.2	50.6	4,428	2,219	1,752	909	23%	8.48
76.1	47.4	3,552	2,273	1,679	525	13%	8.57
83.4	51	4,216	2,243	2,261	257	6%	10.80
87.2	51.4	4,435	2,332	2,140	235	5%	13.25
91.0	51.5	4,640	2,380	2,200	310	7%	14.40

Source: USDA

Canola – Canada

Planted Acres	Yield	Production	Domestic Consump.	Exports	Ending Stocks	Stocks/ Use Ratio	Avg. Price
Mill Acres	Bu/Acre	Mill Bu	Mill Bu	Mill Bu	Mill Bu	%	CN\$/Bu
16.5	35.3	569	221	316	123	23%	8.85
17.6	33.3	564	282	318	97	16%	12.07
19.0	34.3	644	331	383	31	4%	12.79
22.2	27.9	611	309	313	26	4%	13.96
20.4	40.2	818	310	405	133	19%	10.01
20.9	34.9	724	341	406	112	15%	9.99
20.8	39.2	810	381	453	92	11%	10.65
20.8	42.3	864	415	486	59	7%	10.98
23.0	41.3	946	416	478	110	12%	11.19
22.8	40.6	914	439	406	169	20%	10.29
21.2	41.9	878	486	443	151	16%	10.98
20.8	41.8	859	474	466	76	8%	16.56
22.5	25.0	555	382	238	18	3%	24.95
21.7	41.2	893	448	441	26	3%	20.41

Source: Statistics Canada, USDA, ICE

Wheat – Australia

Planted Acres	Yield	Production	Domestic Consump.	Exports	Ending Stocks	Stocks/ Use Ratio	Avg. Price
Mill Acres	Bu/Acre	Mill Bu	Mill Bu	Mill Bu	Mill Bu	%	AUS\$/Bu
34.3	23.4	802	184	543	186	26%	5.94
33.4	30.2	1,007	208	683	301	34%	7.00
34.3	32.0	1,099	233	906	259	23%	6.17
32.1	26.2	840	237	685	171	19%	8.52
31.2	29.8	930	249	684	167	18%	8.60
30.6	28.5	872	263	609	172	20%	8.17
27.9	29.4	818	266	592	142	17%	8.25
30.1	38.8	1,169	287	832	211	19%	7.29
30.2	25.8	781	280	508	216	27%	8.38
25.7	24.7	636	338	331	200	30%	9.58
24.4	21.8	532	320	335	63	10%	10.12
31.8	38.5	1,225	305	872	112	10%	9.53
32.2	41.5	1,336	312	930	207	17%	11.43
31.9	34.6	1,102	277	882	129	11%	16.39

Source: ABARES, USDA

NUTRIEN AG SOLUTIONS – CANADA

(as of Dec 31, 2021)

ALBERTA

(105 LOCATIONS)

Amisk
Balzac
Barrhead
Beaverlodge*
Beiseker*
Bentley
Bonnyville
Bonnyville**
Bow Island
Boyle
Brooks
Calgary
Calgary (DC)
Calgary**
Calmar
Camrose
Camrose* (x2)
Carseland
Carstairs*
Castor
Claresholm
Clyde
Coaldale
Coaldale*
Coronation
Crossfield
Czar*
Daysland
Daysland*
Debolt*
Delburne
Delia
Dewberry
Didsbury
Didsbury*
Drumheller
Edgerton
Enchant
Fairview
Falher
Forestburg*
Fort Macleod
Fort Saskatchewan (x2)
Grassy Lake*
Grimshaw*
Hairy Hill*
Herronton*
High Prairie

High River (x2)
Hythe*
Innisfree
Irma
Iron Springs
Killam
Kipp (DC)
Lethbridge
Lloydminster*
Lougheed
Magrath
McLennan**
Medicine Hat
Medicine Hat*
Milo
Mundare
Mundare*
Myrnam*
Paradise Valley
Penhold
Ponoka
Provost
Red Deer
Rimbey
Rosalind
Rosedale
Rycroft
Ryley (x2)
Sexsmith
Sexsmith*
Silver Valley
Smoky Lake
St. Paul
Stettler
Stony Plain
Stony Plain**
Strathmore
Strome*
Sturgeon County
Taber* (x2)
Torrington*
Valleyview*
Vauxhall
Vegreville
Vermilion
Vermilion (DC)
Viking
Wanham*
Warner
Waskatenau
Welling*
Westlock

BRITISH COLUMBIA

(5 LOCATIONS)

Abbotsford
Delta
Fort St. John
Kelowna
Victoria

MANITOBA

(42 LOCATIONS)

Arborg
Basswood
Beausejour
Benito*
Birch River
Brandon (x2)
Brandon*
Brandon**
Carberry
Carman
Cartwright*
Darlingford
Deloraine
Dencross*
Dunrea*
Fisher Branch*
Fork River*
Franklin
Gilbert Plains
Gladstone*
Glenboro
Gretna*
Grosse Isle
Hamiota
Holland
Lowe Farm
Minitonas*
Ninga
Petersfield*
Pilot Mound*
Portage La Prairie (DC)
Reston
Roblin
Rosser
Rosser (DC)
Souris
St Jean Baptiste
Ste Agathe*
Ste Anne*

Teulon
Winkler*

ONTARIO

(2 LOCATIONS)

Dorchester
Dorchester*

SASKATCHEWAN

(140 LOCATIONS)

Aberdeen
Albertville
Arborefield*
Assiniboia
Assiniboia*
Avonlea
Balcarres
Balgonie*
Biggar
Biggar*
Birch Hills*
Blaine Lake
Buchanan*
Canora
Carnduff
Central Butte
Choieland
Colonsay
Craik
Cudworth
Cut Knife
Cut Knife**
Delisle
Delmas
Dinsmore
Domremy
Drake*
Eatonia
Edam
Elrose
Elstow*
Elstow**
Eston
Ethelton
Fillmore*
Foam Lake
Gravelbourg
Grenfell
Gull Lake**
Hagen

Hoey
Hudson Bay*
Humboldt
Indian Head
Ituna
Kamsack*
Kelvington
Kerrobert
Kincaid
Kindersley
Kindersley**
Kipling*
Landis
Langham
Lemberg
Liberty*
Lucky Lake
Lumsden
Luseland
Macklin
Maidstone
Major
Mankota*
Marsden*
Maymont*
Meadow Lake*
Melfort
Melville
Middle Lake*
Montmartre
Moose Jaw
Moose Jaw*
Moosomin*
Morse
Neilburg
Norquay
North Battleford*
North Battleford
Ogema
Osler
Outlook
Oxbow*
Paradise Hill
Paradise Hill*
Parkside*
Peesane
Pelly*
Perdue
Ponteix*
Porcupine Plain
Prairie River

Prince Albert
R.M. of Mayfield
Radisson*
Radville*
Raymore
Redvers
Redvers*
Regina
Regina*
Regina (DC)
Regina**
Rockhaven
Rosetown
Rosthern
Saskatoon (x2)
Saskatoon (DC)
Saskatoon**
Shaunavon
Shellbrook
Southey
Spiritwood
St. Brieux
Stoughton
Strongfield*
Sturgis*
Swift Current
Thackeray**
Theodore
Tisdale
Torquay
Valparaiso*
Viscount
Wadena
Wakaw
Waldheim
Waldheim*
Waldron
Watrous
Watrous*
Watson
Weyburn
Whitewood*
Wilkie
Wolseley*
Woodrow*
Yorkton
Yorkton**
Yorkton*

* Satellite
** Terminal
DC Distribution Center

NUTRIEN AG SOLUTIONS – US

(as of Dec 31, 2021)

ALABAMA

(12 LOCATIONS)

Atmore
Dothan
Headland*
Kinston
Madison
Selma (x2)
Selma* (x2)
Spanish Fort*
Summerdale*
Theodore**

ARIZONA

(9 LOCATIONS)

Casa Grande*
Chandler
Coolidge
Gila Bend*
Parker
Tucson
Wellton*
Wellton**
Yuma

ARKANSAS

(36 LOCATIONS)

Altheimer
Bay*
Blytheville* (x2)
Cash
Clarendon
Corning
Crawfordsville
Des Arc*
Forrest City
Frenchmans Bayou*
Grady
Hazen
Helena**
Heth*
Hoxie*
Lake City*
Lake Village *
Lepanto
Manila
Manila*
Marianna
Marked Tree
Marvell*

McCrory
Monticello
Monticello*
Osceola*
Osceola (P)
Paragould* (x2)
Portland
Tyronza*
Wheatley*
Winchester*
Wynne

CALIFORNIA

(71 LOCATIONS)

Alpaugh**
Anaheim
Bakersfield*
Bakersfield**
Bakersfield
Biola (P)
Buttonwillow*
Chino*
Coachella*
Corcoran*
Cutler*
Delano
Fallbrook*
Firebaugh
Firebaugh*
Five Points
Fresno (x2)
Fresno**
Goleta*
Greenfield
Hamilton City
Hanford
Hollister
Hollister*
Huron*
Imperial
Kerman* (x3)
Lemoore*
Lindsay
Madera (x2)
Madera*
Madera**
Merced
Modesto (x2)
Newman*
Oxnard

Oxnard* (x3)
Paso Robles
Perris
Porterville
Sacramento
Salinas
Salinas*
San Jacinto*
San Marcos
Santa Maria
Santa Maria*
Sebastopol (x2)
Shafter
Stockton
Temecula
Tipton (Pixley)*
Ukiah*
Vernalis
Visalia
Walnut Grove
Walnut Grove**
Watsonville
Watsonville* (x3)
Woodland
Yuba City

COLORADO

(15 LOCATIONS)

Burlington *
Cheyenne Wells*
Fort Morgan
Fort Morgan*
Greeley (x4)
Greeley (P)
Loveland (x2)
Loveland*
Sterling*
Yuma
Yuma*

CONNECTICUT

(1 LOCATION)

Broad Brook

DELAWARE

(4 LOCATIONS)

Milford (x2)
Seaford*
Smyrna

FLORIDA

(19 LOCATIONS)

Anthony *
Belle Glade
Boynton Beach*
Fort Pierce
Hastings
Hastings*
Homestead
Immokalee
Jay
Marianna
Mulberry (x2)
Mulberry*
Okeechobee
Parrish
Tampa**
Trenton
Wauchula
Waverly

GEORGIA

(45 LOCATIONS)

Albany
Ambrose
Americus
Arlington
Baxley
Bellville
Blakely
Cairo
Camilla
Cochran*
Colquitt
Colquitt**
Cordele (x2)
Cordele*
Cordele**
Cuthbert
Dawson
Doerun
Donalsonville
Greensboro
Greensboro*
Leesburg**
Lenox*
Meigs*
Moultrie (x3)
Moultrie*
Moultrie**

Nashville
Pinehurst
Rochelle*
Statesboro (x2)
Statesboro*
Statesboro**
Swainsboro
Swainsboro*
Sylvester*
Sylvester (x2)
Tifton**
Waycross
Waycross*

HAWAII

(4 LOCATIONS)

Hilo
Hilo*
Kunia
Lihue*

IDAHO

(17 LOCATIONS)

Bancroft
Blackfoot
Buhl*
Burley
Caldwell* (x2)
Glenns Ferry
Hansen
Idaho Falls
Jerome*
Parma (x2)
Paul*
Roberts
Roberts*
Roberts**
Wendell

ILLINOIS

(150 LOCATIONS)

Alexis*
Amboy
Apple River*
Atlanta
Atlanta (DC)
Baileyville
Bethany
Bethany*
Biggsville (x2)

Blandinsville
Bradford*
Browns
Burnt Prairie*
Cambridge*
Camp Grove*
Carlyle
Carmi (x2)
Carthage
Catlin*
Cerro Gordo (x3)
Cerro Gordo*
Chadwick
Chatsworth*
Columbus*
Dalton City*
Danville
Danville**
Delavan
Delavan*
Dewitt
Dewitt*
Dixon (x2)
Dwight
East Dubuque**
Edgewood
Erie*
Fairbury (x2)
Fairview*
Findlay*
Flora (x3)
Franklin Grove*
Fulton**
Galatia
Galesburg*
Galesburg
Gladstone* (x2)
Gladstone**
Goodwine
Goodwine*
Greenfield
Greenville*
Havana*
Hoopeston
Illinois City*
Jacksonville
Johnsonville*
Joy*
Kansas
Keenes

* Satellite
** Terminal
DC Distribution Center
P Plant

NUTRIEN AG SOLUTIONS – US

(as of Dec 31, 2021)

ILLINOIS

(CON'T)

Keenes*
Keithsburg*
Lanark*
Latham*
Lewistown*
Macomb
Macomb*
Macon
Macon*
Marissa
Marseilles**
Mason City*
McLeansboro
Melvin
Meredosia**
Metcalf
Minier
Minier*
Monmouth*
Morrisonville
Moweaqua
Mt Carroll* (x2)
Mt. Carmel*
Mt. Sterling
Neoga
Neoga**
New Baden
New Boston
Newton**
Niota**
Nokomis
Oakland*
Old Shawneetown**
Onarga
Oneida*
Paris*
Patoka*
Paxton
Pittsfield*
Pleasant Hill
Pleasant Hill*
Pontiac
Princeville
Princeville*
Quincy**
Richmond*
Ridgway
Saint Peter

Saunemin*
Sciota*
Shabbona
Sheffield
Sheffield* (x3)
Shelbyville
Sheldon
Sheldon*
Sidney
Smithshire
Springfield
Sterling
Steward
Stockton
Strawn*
Sullivan
Sullivan*
Tamms*
Toledo*
Vandalia
Viola
Walnut* (x2)
Walsh*
Warrensburg
Wenona (x2)
West Brooklyn*
West Union
White Hall
Yates City

INDIANA

(65 LOCATIONS)

Amboy
Arcadia
Attica
Bluffton* (x2)
Boonville*
Brookston**
Brookville
Chalmers
Charlottesville*
Clarks Hill
Clay City*
Dana
Delphi
Elizabethtown
Evansville
Fairmount
Fairmount*
Franklin*

Greensburg (x2)
Hatfield
Hebron
Homer
Jasper
Lafayette**
Lafayette
Lebanon
Lebanon*
Lexington
Liberty*
Liberty**
Milford
Milford**
Morristown
Mt Vernon*
Mt. Vernon**
North Salem*
Oaktown*
Odon*
Orleans
Otwell
Patoka
Pimento*
Poneto**
Poseyville
Princeton
Rochester
Rushville* (x2)
Shelburn
Straughn*
Switz City
Tipton (x3)
Tipton*
Tipton**
Tipton (DC)
Vincennes
Walton**
Warren
West Lebanon*
Wheatland*
Williamsburg

IOWA

(89 LOCATIONS)

Agency*
Albion*
Anthon*
Atalissa
Battle Creek*

Blairstown*
Blakesburg*
Bloomfield
Bloomfield* (x2)
Boone (x2)
Brayton
Breda
Carroll
Clinton
Coin*
Colo*
Conrad
Corning
Creston
Creston**
Danbury
Dunlap
Dyersville
Dyersville**
Edgewood
Edgewood*
Eldon
Eldon*
Essex*
Fairfield
Garnavillo*
Gibson
Glidden
Grundy Center*
Hancock
Hedrick
Hedrick*
Holstein
Hopkinton
Ida Grove
Independence
Irvington
Irvington**
Keosauqua*
Keswick
Keystone*
La Porte City
Low Moor*
LuVerne
Luzerne*
Mediapolis
Mingo
Moravia*
Mount Union
Moville

Moville*
Nevada*
Nevada**
New Sharon
Odebolt
Ogden*
Oskaloosa
Oskaloosa*
Percival* (x2)
Preston
Radcliffe*
Reinbeck
Sac City*
Saint Anthony*
South English*
St. Ansgar*
Union
Van Horne
Wall Lake
Wall Lake* (x2)
Waterloo*
Waterloo**
Waverly
Wellsburg
Wellsburg*
West Union
Whiting
Winthrop
Wyoming*

KANSAS

(65 LOCATIONS)

Atchison
Atchison*
Atwood*
Beloit
Beloit*
Belpre*
Bird City*
Brewster*
Bucklin*
Burrton*
Cimarron
Clay Center
Colby
Colby*
Collyer*
Concordia
Copeland (x2)
Courtland

Galva
Garden City (x2)
Garden City*
Garden City (DC)
Gaylord*
Goddard
Goodland
Goodland* (x4)
Grainfield*
Halstead*
Haven*
Hill City*
Hoxie
Hunter*
Ingalls
Jetmore
Kinsley
Lacrosse*
Leoti
Liberal
Lyons*
Macksville
Mahaska
McPherson*
Minneapolis*
Montezuma**
Morganville*
Morrowville*
Norton*
Oakley
Oakley*
Oberlin
Plains*
Ransom*
Republic*
Saint Fancis*
Scott City*
Smith Center
Solomon*
Stockton*
Sublette*
WaKeeney

KENTUCKY

(45 LOCATIONS)

Allensville
Beaver Dam*
Campbellville
Cecilia
Clarkson*

* Satellite
** Terminal
DC Distribution Center
P Plant

NUTRIEN AG SOLUTIONS – US

(as of Dec 31, 2021)

KENTUCKY

(CON'T)

Clay
Clinton
Clinton* (x2)
Clinton**
Ekron
Elizabethtown
Elizabethtown*
Fancy Farm
Franklin*
Glasgow*
Hardin
Henderson
Henderson**
Hodgenville*
Hopkinsville
Hopkinsville*
Horse Cave
Kevil
Lebanon
Lexington
Morganfield (x2)
Murray**
Murray (x2)
Owensboro
Owensboro**
Owensboro (DC)
Pembroke
Russellville
Russellville*
Russellville**
Sacramento
Salem
Sedalia
Shelbyville
Slaughters
Upton
Waverly

LOUISIANA

(30 LOCATIONS)

Alexandria
Boyce
Bunkie
Bunkie*
Coushatta*
Delhi
Delhi*
Elton

Ferriday
Gilliam*
Hamburg*
Jonesville
Lake Providence (x3)
Mer Rouge
Natchitoches*
New Roads
Opelousas*
Pioneer
Rayville
Schriever*
Tallulah
Thibodaux
Vick*
Ville Platte*
Waterproof*
Winnsboro (x2)
Wisner*

MAINE

(3 LOCATIONS)

Mapleton
Mapleton*
Presque Isle*

MARYLAND

(12 LOCATIONS)

Baltimore**
Boonsboro*
Centreville
Centreville*
East New Market
Girdletree (DC)
Massey*
Pocomoke City
Rosedale
Salisbury
Salisbury*
Worton*

MASSACHUSETTS

(3 LOCATIONS)

Carver
South Deerfield
Sterling

MICHIGAN

(39 LOCATIONS)

Auburn
Bangor
Bear Lake
Benton Harbor
Blissfield
Blissfield**
Breckenridge
Brown City
Carrollton**
Decatur
Decatur**
Deckerville*
Dowagiac*
Gladstone
Greenville
Hamilton
Hart
Henderson
Lake Odessa
Linwood
Melvin*
Mendon
Morenci*
Munger
Nottawa*
Owendale
Reading
Saline
Sandusky
Schoolcraft*
Sparta
Sunfield
Sunfield (DC)
Suttons Bay*
Udby
Wayland (x3)
West Olive

MINNESOTA

(27 LOCATIONS)

Adrian
Alberta
Alden
Benson
Big Lake
Blue Earth

Dassel
Fairmont
Hallock
Hallock*
Harmony
Harmony*
Kasota
Kasota*
Lakefield
LuVerne*
Maynard
Mora*
Perham*
Pipestone
Pipestone*
Plainview
Sargeant
Sauk Centre
Slayton
Wadena*
Winthrop

MISSISSIPPI

(28 locations)

Anguilla*
Benton
Bolton
Boyle
Charleston*
Clarksdale
Greenville (P)
Greenwood*
Grenada
Grenada*
Guntown
Hollandale*
Holly Bluff
Holly Springs*
Houston
Indianola*
Leland (x2)
Macon
Myrtle*
New Albany*
Rolling Fork**
Rosedale**
Sidon*
Tunica
Vaiden*
West Point*
Winterville

MISSOURI

(30 LOCATIONS)

Bernie
Bowling Green (x2)
Brunswick*
Charleston*
Chilhowee*
Clarence
Cooter
Essex*
Greentop*
Harrisonville
Holden*
Hornersville* (x2)
Hughesville
Keytesville (x2)
Marston
Marston**
Memphis*
Palmyra
Paris
Perry
Portageville
Portageville*
Senath (x2)
Sikeston
Sturdivant*
Westboro

MONTANA

(12 LOCATIONS)

Belgrade
Billings
Billings*
Bozeman
Conrad*
Fort Benton*
Froid*
Glasgow*
Great Falls
Hardin
Shelby*
Wolf Point*

NEBRASKA

(47 LOCATIONS)

Alliance
Alliance*
Alma*
Arapahoe*
Arlington

Ashland
Beatrice
Beemer*
Blair*
Bridgeport
Chester
Clearwater*
Coleridge*
Cozad*
Davenport
Deshler
Edgar*
Elwood
Fairbury
Fairbury (P)
Fairmont
Fremont (x2)
Grant
Hastings
Heartwell
Heartwell*
Holdrege
Holdrege**
Imperial
Imperial*
Johnson
Kearney
Lamar
Laurel*
McCook
Nickerson*
Ogallala
Ogallala*
Oxford
Parks*
Ravenna*
South Sioux City
Superior
Thurston
Waterloo*
York*

NEVADA

(3 LOCATIONS)

Las Vegas
Sparks
Yerington*

* Satellite
** Terminal
DC Distribution Center
P Plant

NUTRIEN AG SOLUTIONS – US

(as of Dec 31, 2021)

NEW JERSEY

(3 LOCATIONS)

Bridgeton
North Brunswick
Pittstown

NEW MEXICO

(4 LOCATIONS)

Artesia
Hatch*
Portales
Vado

NEW YORK

(14 LOCATIONS)

Amenia
Avon*
Cohocton*
Dansville
Fancher
Goshen
Hall
Lockport*
Marion
Milton
Mt Morris*
Oswego**
Rochester**
Sodus

NORTH CAROLINA

(52 LOCATIONS)

Albemarle*
Albertson*
Belgrade*
Belhaven
Brown Summit
Bunn*
Clinton
Clinton*
Colerain
Conway
Creswell*
Denton**
Elizabeth City*
Enfield
Erwin
Fairfield
Fairmont* (x2)
Four Oaks*

Greenville* (x2)

Hendersonville
Jefferson
Kenly
Laurinburg
Lumberton
Monroe*
Nashville*
Newland
Norwood
Pantego*
Princeton
Red Oak*
Robersonville*
Rocky Mount
Salemberg
Sanford
Shawboro
Snow Hill
Sophia
Statesville
Tarboro* (x2)
Tarboro (DC)
Trenton
Vanceboro
Wilmington (x2)
Wilmington**
Wilson
Wilson**
Yadkinville

NORTH DAKOTA

(19 LOCATIONS)

Bismarck
Bismarck* (x2)
CAVALIER*
Devils Lake
Dickinson
Grace City
Grafton*
Grand Forks (x2)
Grand Forks (DC)
Hatton*
Jamestown
Mapleton
Minot
Minot *
Reynolds (DC)
Wahpeton
Williston

OHIO

(47 LOCATIONS)

Ansonia
Attica
Attica**
Attica (DC)
Bainbridge
Bradford*
Carey*
Cincinnati**
Circleville*
Delphos
Dunkirk*
Eaton
Edison
Findlay (x2)
Frankfort
Greenville
Greenville**
Hamler
Jeromesville*
Laurelville
Maumee**
Midland
Milford Center
Mowrystown
Mt. Sterling (x2)
Mt. Sterling*
Mt. Sterling**
Mt. Sterling (DC) (x2)
Ottawa
Ottawa**
Polk
Sabina
Sidney
Sidney**
Thurston
Toledo**
Upper Sandusky (x2)
Urbana
Urbana*
Washington Court House
Washington Court House**
West Leipsic*
Wilmington*

OKLAHOMA

(13 LOCATIONS)

Altus
Altus**
Billings
Chattanooga*
Clinton
Fairview*
Guymon (x2)
Guymon*
Lamont*
Shattuck
Tyrone*
Webbers Falls

OREGON

(13 LOCATIONS)

Athena
Baker City*
Cornelius
Corvallis*
Hermiston*
La Grande
North Powder*
Pendleton*
Rickreall*
Salem (x2)
Salem*
Tangent

PENNSYLVANIA

(7 LOCATIONS)

Biglerville
Bloomsburg
Butler
Holtwood
Shippensburg (x2)
Tyrone

SOUTH CAROLINA

(8 LOCATIONS)

Aynor
Bishopville
Darlington*
Darlington (DC)
Hemingway*
Kingstree
Luray*
Orangeburg

SOUTH DAKOTA

(14 LOCATIONS)

Bridgewater
Brookings
Centerville
Elk Point
Emery*
Meckling
Northville
Parker
Parkston
Spearfish
Spearfish*
Vermillion (x2)
Vermillion*

TENNESSEE

(22 LOCATIONS)

Alamo
Brownsville
Clarksville (x2)
Clarksville*
Clarksville**
Covington
Dyersburg
Ethridge
Hillsboro
Hillsboro*
Huntingdon
Memphis**
Milan*
Portland
Portland*
Ridgely
Union City
Union City**
Union City (DC) (x2)
Whiteville

TEXAS

(69 LOCATIONS)

Anson*
Balmorhea*
Big Spring
Blessing*
Brownfield
Brownfield* (x2)
Caldwell
Clarendon
Cotton Center
Crosbyton*
De Leon*
Dimmitt
Dumas*
Edinburg*
Edna
El Campo*
Falls City*
Fieldton
Floydada
Harlingen*
Hartley* (x2)
Hillsboro
Houston
Houston*
Idalou*
Kingsville*
Knox City* (x2)
Lamesa
Lamesa*
Levelland
Marion*
Moody*
Morton*
Muleshoe
Munday
Needville* (x2)
Olton*
Palmer*
Paris*
Pittsburg
Plains
Plains*
Plainview
Plainview* (x3)
Ralls*
Roscoe
Rosebud*
San Angelo
Santa Rosa
Seagraves (x2)
Seminole
Slaton
Slaton**
Sudan*
Taft
Taylor
Taylor*
Victoria*
Waka*
Wharton
Winnie*
Winters*

* Satellite
** Terminal
DC Distribution Center
P Plant

NUTRIEN AG SOLUTIONS – US

(as of Dec 31, 2021)

UTAH

(1 LOCATION)

Tremonton*

VERMONT

(1 LOCATION)

Addison

VIRGINIA

(20 LOCATIONS)

Belle Haven*

Belle Haven*

Chesapeake**

Cloverdale

Colonial Heights

Colonial Heights*

Crystal Hill*

Eastville*

Haynesville

Heathsville*

Ivor

King George*

Melfa

Milford*

Mt. Holly*

Prince George**

South Hill

St. Stephens Church

Tasley*

Winchester

Wylliesburg

WASHINGTON

(27 LOCATIONS)

Almira*

Connell*

Coulee City

Davenport

Harrington*

Mansfield*

Moses Lake

Moses Lake*

Okanogan

Okanogan*

Othello*

Pasco (x3)

Pasco*

Plymouth

Plymouth* (x2)

Pomeroy

Prescott*

Quincy*

Reardan*

Rosalia

Sunnyside

Toppenish*

Walla Walla

Waterville*

WISCONSIN

(15 LOCATIONS)

Beloit

Cuba City*

DeForest

DeForest*

Galesville

Janesville*

Mineral Point*

Plainfield

Plainfield* (x4)

Shullsburg

Wisconsin Rapids*

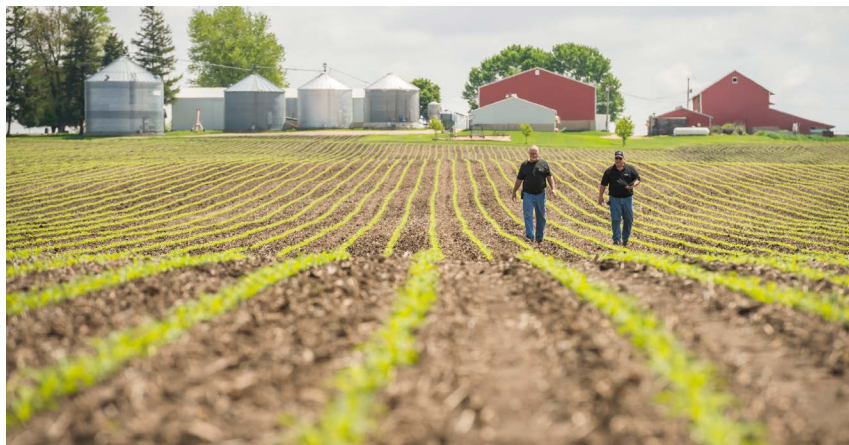
Wisconsin Rapids**

* Satellite

** Terminal

DC Distribution Center

P Plant



NUTRIEN AG SOLUTIONS – AUSTRALIA

(as of Dec 31, 2021)

NEW SOUTH WALES

(92 LOCATIONS)

Albury (x2)
Ardlethan
Ariah Park
Armidale
Barham
Bathurst (x2)
Bomaderry (x2)
Bombala
Bourke
Braidwood
Broken Hill
Casino
Cobar
Coleambally
Coolah
Cooma (x2)
Coonabarabran
Coonamble
Cootamundra
Corowa (x2)
Cowra
Crookwell
Culcairn
Delegate
Deniliquin
Dorrigo
Dubbo
Finley
Forbes (x2)
Gilgandra
Glen Innes
Goulburn
Grafton
Griffith
Gunnedah (x3)
Guyra (x2)
Hay
Hillston (x2)
Holbrook
Inverell (x2)
Lockhart
Marrar
Merriwa
Mildura
Milton
Moree (x2)
Moss Vale

Mudgee
Mungindi
Narrabri (x2)
Narrandera
Narromine
Nyngan
Parkes (x2)
Peak Hill
Quirindi
Raymond Terrace
Robertson
Rutherford
Scone (x2)
Tamworth (x2)
Tarcutta
Temora
Urana
Wagga Wagga (x2)
Walcha
Walgett
Warren
Warren
Wee Waa
West Wyalong
Wetherill Park (DC)
Windsor
Yass
Young
Young

NORTHERN TERRITORY

(3 LOCATIONS)

Alice Springs
Darwin
Katherine

QUEENSLAND

(77 LOCATIONS)

Acacia Ridge (DC) (x2)
Atherton
Ayr
Ballandean
Biloela (x2)
Blackall (x3)
Bowen
Brendale
Bundaberg
Charleville
Charters Towers (x2)

Childers
Chinchilla
Clermont
Cloncurry
Cunnamulla (x2)
Dalby
Emerald (x2)
Gatton
Gladstone
Goondiwindi (x3)
Gympie
Home Hill
Hughenden
Ingham
Injune
Kingaroy (DC)
Kingaroy
Kumbia
Longreach (x2)
Mackay
Mareeba (x2)
Maryborough
Meandarra
Miles
Mitchell
Mundubbera
Murgon
Nerang
Oakey
Oakwood (DC)
Pittsworth
Quilpie (x2)
Richmond
Rockhampton (x3)
Roma (x2)
Springsure
St George (x2)
Tambo
Taroom (x2)
Tolga
Toogoolawah
Toowoomba
Townsville
Toowoomba
Tully
Wallaville
Wandoan
Winton
Yandina

SOUTH AUSTRALIA

(70 LOCATIONS)

Adelaide (x2)
Arthurton
Balaklava
Berri
Bordertown
Burra
Bute
Ceduna
Clare (x2)
Cleve
Cooke Plains
Coorong
Cowell
Crystal Brook (x2)
Cummins
Dublin
Eudunda
Gawler
Gillman (DC)
Jamestown
Jolpac Bordertown
Kadina
Kapunda
Kapunda
Karoonda
Keith (x2)
Kimba (x2)
Kingscote
Kingston
Lameroo (x2)
Lock
Loxton
Loxton
Lucindale
Mallala
Melrose
Millicent
Minlaton
Mt Gambier (x2)
Murray Bridge
Murraylands
Naracoorte (x2)
Nuriootpa
Padthaway
Penola
Peterborough

Pinnaroo
Platinum Ag Balaklava
Port Augusta
Renmark (x2)
Renmark (P)
Riverton
Salisbury South (DC)
Strathalbyn
Streaky Bay
Tintinara
Tumby Bay
Virginia
Waikerie
Warooka
Wudinna

TASMANIA

(30 LOCATIONS)

Bicheno
Bridgewater
Burnie
Campbell Town
Deloraine
Devonport
Exeter
Flinders Island
Glenorchy
Horbart
Huonville
Latrobe (x2)
Launceston
Legerwood
Longford
Moonah
Oatlands
Prospect (x2)
Scottsdale
Shearwater
Sheffield
Smithton
Somerset
Sorell
Ulverstone (x2)
Wynyard
Youngtown

VICTORIA

(71 LOCATIONS)

Alexandra
Ararat
Bairnsdale (x2)
Ballarat South
Bannockburn
Bayswater (x2)
Benalla
Bendigo
Berriwilllock
Birchip
Boort
Casterton
Cobram
Cohuna (x3)
Congupna
Dandenong (P)
Dimboola
Donald
Echuca
Edenhope
Elmore
Euroa
Foster
Geelong
Hamilton
Heyfield
Horsham (DC)
Horsham
Kaniva
Kerang (x2)
Kilmore
Kyneton
Lake Bolac
Laverton North
Leitchville
Leongatha (x2)
Manangatang
Mansfield
Mildura (x2)
Moe
Mortlake
Myrtleford
Nhill
Ouyen
Sale
Seymour
Shepparton

** Terminal
DC Distribution Center
P Plant

NUTRIEN AG SOLUTIONS – AUSTRALIA

(as of Dec 31, 2021)

VICTORIA

(CON'T)

Skipton
St Arnaud
Stawell (x2)
Swan Hill (x2)
Tatura
Timboon (DC)
Timboon
TraralgonTRARALGON
Tullamarine
Wandin
Wangaratta
Warragul
Wodonga
Wonthaggi
Yea

WESTERN AUSTRALIA

(71 LOCATIONS)

Albany
Albany**
Badgingarra
Balcatta
Bibra Lake (DC)
Bibra Lake
Bruce Rock
Bunbury (x2)
Busselton
Byford
Canning Vale
Carnamah
Castletown
Coorow

Corrigin
Dalwallinu
Dandaragan
Dumbleyung
Esperance
Esperance**
Geraldton (x2)
Geraldton**
Gnowangerup
Greenwood
Hyden
Jerramungup
Joondalup
Kalannie
Katanning (x2)
Kewdale (DC)
Kojonup

Kulin
Kwinana**
Kwinana Beach (P)
Lake Grace
Lake King
Malaga (x2)
Mandurah
Manjimup
Margaret River
Merredin (x2)
Midvale (x2)
Mingenew
Moora
Morawa
Mount Barker
Mukinbudin
Myaree

Narembreen
Narrogin
Neerabup
Newdegate
Northam
Osborne Park
Pingelly
Pingrup
Quairading
Ravensthorpe
Rockingham
Tambellup
Three Springs
Wattleup
Wongan Hills
Wyalkatchem
York

** Terminal
DC Distribution Center
P Plant



NUTRIEN AG SOLUTIONS – SOUTH AMERICA

(as of Dec 31, 2021)

ARGENTINA BUENOS AIRES

(25 LOCATIONS)

Alberdi
America
Arenales*
Balcarce
Bolivar
Cnel. Suarez
Colonia Hinojo
Colonia Hinojo (P)
Cucha Cucha
El Arbolito
French
Gardey
General Villegas*
Lincoln
Mechita
Norberto De La Riestra
O'Higgins
Pehuajó
Pieres
Salto*
San Antonio De Areco
San Nicolas*
Treinta De Agosto
Trenque Lauquen*
Tres Arroyos

CÓRDOBA

(11 LOCATIONS)

Laboulaye
Laguna Larga*
Cnel. Baigorria
Colonia Bismarck
Gral. Cabrera
Gral. Roca

La Carlota
Monte Buey*
Río Segundo
Tancacha *
Villa Maria

ENTRE RÍOS

(3 LOCATIONS)

Victoria
Paraná
Villaguay

LA PAMPA

(1 LOCATION)

General Pico

MENDOZA

(1 LOCATION)

Cuyo

SALTA

(1 LOCATION)

Rosario De La Fronera

SANTA FE

(9 LOCATIONS)

Casilda
Chapuy
Galvez
La California
Peyrano
Rafaela
Casilda (P)
Col Casilda (W)
Rufino*

BRAZIL GOIÁS

(19 locations)

Catalão
Cristalina
Cristalina (B)
Formosa (EC)
Goiânia
Goiatuba
Jataí
Montividiu
Morrinhos
Morrinhos (B)
Paraúna
Paraúna (W)
Rio Verde
Rio Verde (P) (x2)
Rio Verde (W)
Santa Helena De Goiás
Santa Helena De Goiás (W)
Uruaçu (EC)

MATO GROSSO DO SUL

(8 LOCATIONS)

Caarapó
Dourados
Jardim
Laguna Carapã
Naviraí
Nova Alvorada do Sul
Nova Andradina
Ponta Porã

MINAS GERAIS

(17 LOCATIONS)

Araxá
Araxá (B)
Araxá (EC)
Boa Esperança
Bom Despacho
Carmópolis de Minas
Coromandel (EC)
Ibiá
Lagoa Dourada
Lavras
Madre de Deus de Minas
Minduri
Patrocínio (EC)
Três Corações
Três Pontas
Uberaba (EC)
Uberlandia (EC)

SÃO PAULO

(17 LOCATIONS)

Angatuba
Avaré
Capão Bonito
Elias Fausto (x2)
Itapetininga (x2)
Itapetininga (B)
Itapeva
Limeira
Mogi Guaçu
Patos De Minas (EC)
Ribeirão Preto (P)
Ribeirão Preto (W)
São Miguel Arcanjo

Taquarituba
Vargem Grande

TOCANTINS

(2 LOCATIONS)

Gurupi (EC)
Porto Nacional (EC)

CHILE

IV REGIÓN

(1 LOCATION)

Coquimbo

IX REGIÓN

(1 LOCATION)

Lautaro

REGIÓN METROPOLITANA

(2 LOCATIONS)

Buín-Paine
Malloco

V REGIÓN

(1 LOCATION)

Quillota

VI REGIÓN

(2 LOCATIONS)

San Fernando
Rancagua

VII REGIÓN

(2 LOCATIONS)

Curicó
Linares

VIII REGIÓN

(2 LOCATIONS)

Los Angeles
Chillán

X REGIÓN

(1 LOCATION)

Osorno

URUGUAY COLONIA

(2 LOCATIONS)

Ombues*
Tararira

DURAZNO

(1 LOCATION)

Durazno

PAYSANDÚ

(1 LOCATION)

Constancia

RÍO NEGRO

(1 LOCATION)

Young

SAN JOSÉ

(1 LOCATION)

San José

SORIANO

(2 LOCATIONS)

Dolores
Mercedes*

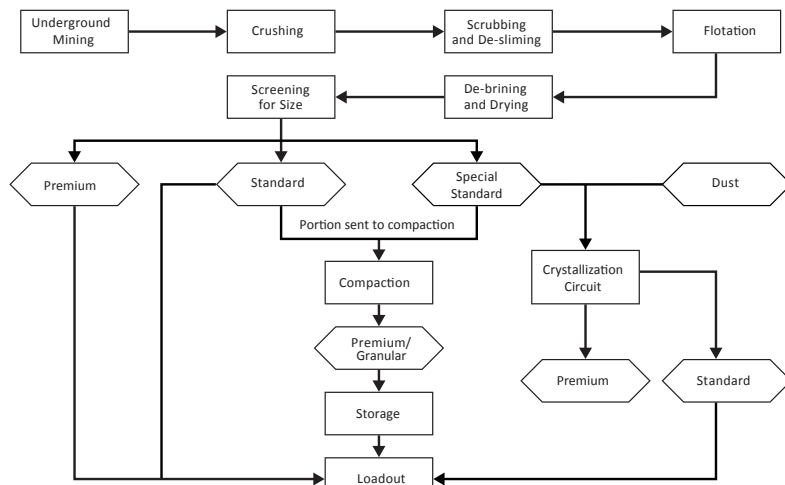
* Satellite
W Warehouse
P Plant
B Blending Facility
EC Experience Center



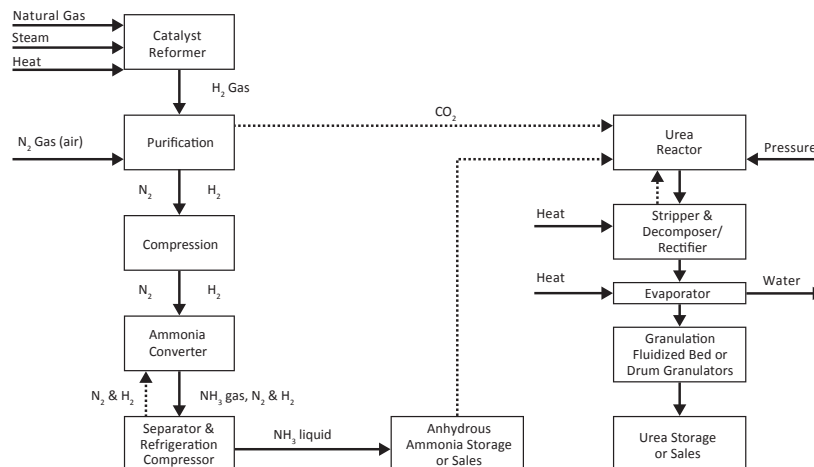
CONSTANTS & CONVERSIONS

FERTILIZER PRODUCTION PROCESS

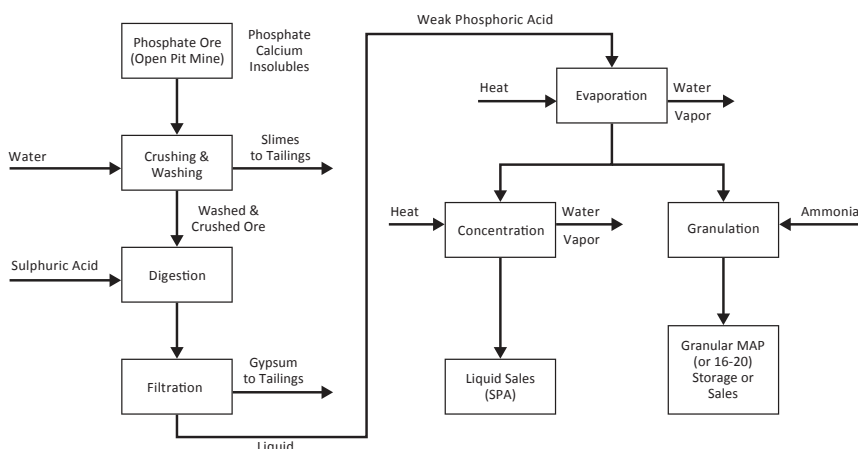
Potassium Fertilizer



Nitrogen Fertilizer



Phosphate Fertilizer



Underground Sources

- Usually deep deposits. First step is to mine the ore and get it to the surface
- Manufacturing process (remove unwanted minerals) clays, NaCl, MgCl₂, de-sliming and froth flotation
- Sizing and granulation – made into final product

Potassium Rock Sources

- Sylvinite is composed of a mixture of KCl and NaCl crystals, 20–40% K₂O (Saskatchewan mines)
- Sylvite is extracted from Sylvinite and is composed of primarily KCl, 63% K₂O
- Langebeinite is composed primarily of K₂SO₄ and MgSO₄, 23% K₂O

Common Potassium Fertilizers

- Potassium Chloride (KCl) muriate of potash (MOP), 0-0-60 to 62 (accounts for 90% of potash sales in North America)
- Potassium Sulphate (K₂SO₄) or sulfate of potash, 0-0-50-18S
- Sulphate of Potash-Magnesia (K₂SO₄-2MgSO₄) or K-Mag, 0-0-22-22S-11 Mg
- Potassium Nitrate (KNO₃) 13-0-44 often used in foliar sprays

CONSTANTS & CONVERSIONS

RAW MATERIAL REQUIREMENTS

Ammonia (NH₃)

The production of 1 tonne of ammonia requires:

- 32–38 mmBtu natural gas
or
- 0.9 tonnes naphtha
or
- 1.05 tonnes fuel oil
or
- 1.90 tonnes coal
or
- 8,000–12,000 kWh (electrolysis)

Nitric Acid (HNO₃)

The production of 1 tonne of 100%

HNO₃ requires:

- 0.29 tonnes ammonia

Ammonium Nitrate (34% N)

The production of 1 tonne of 34% N ammonium nitrate requires:

- 0.436 tonnes of total ammonia
- 0.21 tonnes ammonia
- 0.78 tonnes of 100% HNO₃
(0.226 tonne of ammonia)

Urea

The production of 1 tonne of urea requires:

- 0.58 tonnes of ammonia
- 0.76 tonnes of carbon dioxide

Ammonium Sulphate

The production of 1 tonne of ammonium sulphate requires:

- 0.26 tonnes ammonia
- 0.75 tonnes sulphuric acid

Sulphuric Acid (H₂SO₄)

The production of 1 tonne of 100% H₂SO₄ requires:

- 0.76 tonnes pyrites (48% S)
or
- 0.33 tonnes sulphur

UAN

The production of 1 tonne of UAN requires:

- 28-0-0 Solution
0.386 tonnes of 34-0-0
0.310 tonnes of 46-0-0
- 32-0-0 Solution
0.443 tonnes of 34-0-0
0.354 tonnes of 46-0-0

Phosphoric Acid (H₃PO₄) (Wet Process)

The production of 1 tonne of 100% P₂O₅ as H₃PO₄ requires:

- 3.6 tonnes phosphate rock 63% BPL⁽¹⁾
- 2.8 tonnes 100% H₂SO₄ or
- 2.3 tonnes 100% HCl

Phosphoric Acid (Thermal Process)

The production of 1 tonne of 100% P₂O₅ requires:

- 3.9 tonnes of phosphate rock 63% BPL⁽¹⁾
- 1.3 tonnes of silica
- 0.60 tonnes of coke
- 13,000–15,000 kWh electricity

Superphosphate

The production of 1 tonne of 20% P₂O₅ single superphosphate requires:

- 0.71 tonnes of phosphate rock 63% BPL⁽¹⁾
- 0.37 tonnes of 100% H₂SO₄

Triple Superphosphate

The production of 1 tonne of 46% P₂O₅ triple superphosphate requires:

- 0.43 tonnes of phosphate rock 63% BPL⁽¹⁾
- 0.85 tonnes of 40% P₂O₅ phosphoric acid (0.34 tonne P₂O₅)

Monoammonium Phosphate

The production of 1 tonne of monoammonium phosphate (11-52-0) requires:

- 0.145 tonnes of ammonia
- 1.91 tonnes of phosphate rock at 63% BPL⁽¹⁾
- 0.475 tonnes of sulphur
- 1.35 tonnes of 40% P₂O₅ phosphoric acid (0.54 tonne P₂O₅)

Diammonium Phosphate

The production of 1 tonne of diammonium phosphate (18-46-0) requires:

- 0.219 tonnes of ammonia
- 1.72 tonnes of phosphate rock at 63% BPL⁽¹⁾
- 0.427 tonnes of sulphur
- 1.175 tonnes of phosphoric acid (0.470 tonne P₂O₅)

FERTILIZER MATERIALS

Sulphur Minerals

Iron pyrites	FeS ₂
Pyrrhotite	Fe ₇ S ₈
Gypsum	CaSO ₄ 2H ₂ O
Anhydrite	CaSO ₄

% S Phosphate Rock

40-53	Tricalcium phosphate	Ca ₃ (PO ₄) ₂ 46	% P ₂ O ₅
40	Fluorapatite	Ca ₁₀ (PO ₄) ₆ F ₂	46
19	Carbonate apatite	Ca ₁₀ (PO ₄) ₆ CO ₃	42
24	Hydroxyapatite	Ca ₁₀ (PO ₄) ₆ (OH) ₂	41

Potash Minerals/Ores

		% K ₂ O
Sylvite	KCl	63
Sylvinite	KCl NaCl	35
Carnallite	KCl MgCl ₂ 6H ₂ O	17
Kainite	KCl MgSO ₄ 3H ₂ O	19
Langbeinite	K ₂ SO ₄ 2MgSO ₄	23
Polyhalite	K ₂ S ₄ MgSO ₄ 2CaSO ₄ H ₂ O	16
Alunite	K ₂ SO ₄ Al ₂ (SO ₄) ₃ 4Al(OH) ₃	11

(1) 63% BPL = 29% P₂O₅

CONSTANTS & CONVERSIONS

GENERAL CONVERSION FACTORS

1 Acre	=	0.4048	Hectares
1 Acre	=	4.048×10^3	Sq. kilometers
1 Acre	=	43,560	Sq. feet
1 Atmosphere	=	14.696	Pounds/sq. inch
1 Atmosphere	=	1.033	Kilograms/sq. cm
1 Barrel (oil)	=	42	Gallons, US
1 Cubic foot	=	2.8317×10^{-2}	Cubic meter
1 Cubic foot	=	6.2291	Gallons, Imperial
1 Cubic foot	=	7.4805	Gallons, US
1 Cubic foot	=	28.3170	Liters
1 Cubic foot	=	0.025	Tons, US Shipping
1 Cubic meter	=	1.308	Cubic yards
1 Cubic meter	=	220	Gallons, Imperial
1 Cubic meter	=	265	Gallons, US
1 Cubic meter	=	6.289	Barrels (oil)
1 Cubic meter	=	3.5830×10^{11}	mmBtu
1 Degree Fahrenheit	=	$(^{\circ}\text{F}-32) \times 0.556$	Degree Centigrade
1 Degree Centigrade	=	$(^{\circ}\text{C} \times 1.8) + 32$	Degree Fahrenheit
1 Dollar/metric ton	=	0.90719	Dollars/short ton
1 Dollar/short ton	=	1.1023	Dollars/metric tonne
1 Gallon, Imperial	=	1.201	Gallons, US
1 Gallon, Imperial	=	4.5461	Liters
1 Gallon, US	=	3.7853	Liters
1 Grain/gallon	=	17.12	Parts/million
1 Grain	=	2.205×10^{-3}	Pounds
1 Sq. foot	=	9.29×10^{-6}	Hectares
1 Sq. meter	=	10.764	Sq. feet
1 Sq. meter	=	1.196	Sq. yards
1 Sq. mile	=	259.00	Hectares
1 Sq. mile	=	2.590	Sq. kilometers
1 Ton, long	=	1016.05	Kilograms
1 Ton, long	=	2,240	Pounds
1 Ton, long	=	1.0161	Tonnes
1 Ton, long	=	1.120	Tons, short
1 Ton, long/acre	=	2.511	Tonnes/hectare
1 Ton, long/sq. ft.	=	1.0937×10^{-4}	Kilograms/sq. meter
1 Ton, long/sq. inch	=	1.575	Kilograms/sq. mm
1 Ton, metric	=	2,204.6	Pounds
1 Tonne, metric	=	0.9842	L. tons
1 Tonne, metric	=	1.102	S. tons
1 Tonne, metric/hectare	=	0.3982	L. tons/acre
1 Tonne, metric/hectare	=	0.4460	S. tons/acre
1 Ton, short	=	907.19	Kilograms
1 Ton, short	=	2,000	Pounds
1 Ton, short/acre	=	2.242	Tonnes/hectare
1 Ton, Brit Shipping	=	1.050	Tons, US Shipping
1 Ton, US Shipping	=	40.0	Cubic Feet
1 Yard	=	0.9144	Meters

ENERGY CONVERSION FACTORS

1 Btu	=	0.252	kcal
1 Btu	=	2.931×10^{-4}	KWh
1 Btu/cu. ft.	=	8.90	kcal/m ³
1 Million Btu	=	1.055	GJ
1 Million Btu	=	0.9649	Mcf
1 GJ	=	0.9145	Mcf
1 Million Btu/tonne	=	0.90719	Million Btu/short ton
1 Million Btu/short ton	=	0.2777	Million kcal/tonne
1 Million Btu/long ton	=	0.248	Million kcal/tonne
1 Calorie	=	4.186	Joules
1 Horsepower hr	=	0.746	KWh
1 Million kcal/tonne	=	4.033	Million Btu/l. ton
1 Million kcal/tonne	=	3.601	Million Btu/s. ton
1 KWh	=	3.411	MBtu
1 KWh	=	859.6	kcal
1 KWh	=	1.34	Horsepower hrs
1 KWh	=	2.4	lb HP steam (42 atm)
1 KWh	=	3.0	lb HP steam (3 atm)
1 kWh/tonne	=	0.90719	kWh/short ton
1 kWh/short ton	=	1.1023	kWh/tonne
1 mcm	=	36.59	mmBtu at heat of 1,036.4 Btu/cf

PRODUCT ANALYSIS

	%N	%P ₂ O ₅	%K ₂ O
Ammonia, anhydrous	82	0	0
Ammonia, aqua	20.5–28	0	0
Ammonium chloride	25–26	0	0
Ammonium nitrate	34.5	0	0
Ammonium phosphate sulphate	16	20	0
Ammonium sulphate	21	0	0
Ammonium polyphosphate solution	10	34	0
Monoammonium phosphate	11	52	0
	12	51	0
Diammonium phosphate	18	46	0
Nitric acid (100%)	22.2	0	0
Nitric acid (60%)	13	0	0
Sodium nitrate	16	0	0
Urea	46	0	0
Urea ammonium nitrate solutions	28–32	0	0
Urea ammonium phosphate	34	17	0
	33	20	0
	29	29	0
Calcium ammonium nitrate	20.5–28	0	0
Calcium nitrate	11.9–15.5	0	0
Dicalcium phosphate—anhydrous	0	52.2	0
Dicalcium phosphate—dihydrate	0	41.3	0
Single superphosphate	0	16–22	0
Triple superphosphate	0	44–48	0
Defluorinated phosphate	0	37	0
Fused magnesium phosphate	0	19–20	0
Phosphoric acid 100%	0	74.2	0
Phosphoric acid merchant grade	0	54	0
Superphosphoric acid	0	70	0
Muriate of potash	0	0	60
Potassium sulphate	0	0	50–54
Potassium nitrate	13	0	44
Potassium magnesium sulphate	0	0	21.9

CONSTANTS & CONVERSIONS

CROP WEIGHT CONVERSIONS

Crop	1 tonne =	1 bu =
Barley (Australia, New Zealand)	44.092 bu (50 lbs)	0.022680 tonne
Barley (United States, Canada)	45.931 bu (48 lbs)	0.021772 tonne
Canola/Rapeseed	44.092 bu (60 lbs)	0.022680 tonne
Flaxseed (United States, Canada, Australia)	39.368 bu (56 lbs)	0.025401 tonne
Corn (Maize) (United States, Canada, Australia, New Zealand)	39.368 bu (56 lbs)	0.025401 tonne
Oats (Australia, New Zealand)	55.116 bu (40 lbs)	0.018144 tonne
Oats (Canada)	64.842 bu (34 lbs)	0.015422 tonne
Oats (United States)	68.894 bu (32 lbs)	0.014515 tonne
Potatoes (United States, Canada)	36.744 bu (60 lbs)	0.027216 tonne
Rice, paddy (Australia)	52.490 bu (42 lbs)	0.019501 tonne
Rice, paddy (United States)	48.991 bu (45 lbs)	0.020412 tonne
Rye (Australia)	36.744 bu (60 lbs)	0.027216 tonne
Rye (United States, Canada, United Kingdom, New Zealand)	39.368 bu (56 lbs)	0.025401 tonne
Soya beans (United States)	36.744 bu (60 lbs)	0.027216 tonne
Wheat (generally applicable)	36.744 bu (60 lbs)	0.027216 tonne

NUTRIENT FACTORS

To Convert	To	Multiply By
P ₂ O ₅	BPL	2.185
BPL	P ₂ O ₅	0.4577
KCl	K ₂ O	0.61
K ₂ O (K)	KCl	1.6

CALORIFIC VALUES

Natural gas	900–1,100 Btu/ft ³	Fuel oil	40 mmBtu/tonne
LNG	49-53 mmBtu/tonne	Coal	20-30 mmBtu/tonne
LPG	46 mmBtu/tonne	Methanol	21 mmBtu/tonne
Naphtha	44 mmBtu/tonne	Hydrogen	113 mmBtu/tonne

FLORIDA ROCK:

Polk County = 68-70% BPL

Hardee County = 62-66% BPL

WESTERN US STATES

Phosphate Rock = 70% BPL



IFA REGIONAL CLASSIFICATION

WESTERN AND CENTRAL EUROPE

Albania	Italy*
Austria*	Netherlands*
Belgium* and Luxembourg*	Norway
Bosnia Herzegovina	Poland*
Bulgaria*	Portugal*
Croatia*	Romania*
Czech Republic*	Serbia
Denmark*	Slovakia*
Finland*	Slovenia*
France*	Spain*
Germany*	Sweden*
Greece*	Switzerland
Hungary*	United Kingdom
Ireland*	Others

EASTERN EUROPE

Armenia
Azerbaijan
Belarus
Estonia*
Georgia
Kazakhstan
Kyrgyzstan
Latvia*
Lithuania*
Moldova
Russian Federation
Tajikistan
Turkmenistan
Ukraine
Uzbekistan
Others

NORTH AMERICA

Canada
United States

OCEANIA

Australia
New Zealand
Papua New Guinea
Others

AFRICA

Algeria
Cameroon
Côte d'Ivoire
Egypt
Ethiopia
Kenya
Libya
Mauritius
Morocco
Nigeria
Senegal
South Africa
Sudan
Tanzania
Tunisia
Zambia
Zimbabwe
Others

LATIN AMERICA AND CARIBBEAN

Argentina	El Salvador
Brazil	Guatemala
Chile	Mexico
Colombia	Nicaragua
Costa Rica	Peru
Cuba	Trinidad and Tobago
Dominican Republic	Uruguay
Ecuador	Venezuela
	Others

EAST ASIA

Cambodia
China
Indonesia
Japan
Korea D.P.R.
Korea, Republic of
Laos
Malaysia
Mongolia
Myanmar
Philippines
Singapore
Thailand
Taiwan/China
Vietnam
Others

WEST ASIA

Afghanistan
Bahrain
Cyprus*
Iran
Iraq
Israel
Jordan
Lebanon
Oman
Qatar
Saudi Arabia
Syria
Turkey
United Arab Emirates
Yemen
Others

SOUTH ASIA

Bangladesh
India
Nepal
Pakistan
Sri Lanka
Others

* States that are member of The European Union (EU)

Note: The designation employed and the presentation of material in this information product do not imply the expression of any opinion whatsoever on the part of the International Fertilizer Industry Association (IFA) concerning the legal status of any country, territory, city or area or its authorities, or concerning the delimitation of its frontiers or boundaries.

Forward-Looking Statements

Certain statements and other information included in this document, constitute "forward-looking information" or "forward-looking statements" (collectively, "forward-looking statements") under applicable securities laws (such statements are often accompanied by words such as "anticipate", "forecast", "expect", "believe", "may", "will", "should", "estimate", "intend" or other similar words). All statements in this document, other than those relating to historical information or current conditions, are forward-looking statements, including, but not limited to: Nutrien's business strategies, plans, prospects and opportunities; expectations regarding our growth and capital allocation intentions and strategies; expectations regarding performance of our operating segments, including the anticipated supply and demand for our products and services, expected market and industry conditions with respect to crop nutrient application rates, planted acres, grower crop investment, crop mix, prices and the impact of import and export volumes and economic sanctions; our expectations for total potash operational capability; Nutrien's ability to develop innovative and sustainable solutions; the negotiation of sales contracts; expectations regarding our sustainability, climate-change and ESG initiatives, including our GHG emissions reduction strategy, Carbon Program and related programs and initiatives, including the timing of verification thereof; our GHG emissions reduction target, including our plans with respect thereto and estimated capital expenditures required to achieve that target; initiatives to promote sustainable and productive agriculture; Nutrien's evaluation of the clean ammonia plant project in Geismar, including the cost, benefits and the timing thereof; acquisitions and divestitures; and expectations in connection with our ability to deliver long-term returns to shareholders. These forward-looking statements are subject to a number of assumptions, risks and uncertainties, many of which are beyond our control, which could cause actual results to differ materially from such forward-looking statements. As such, undue reliance should not be placed on these forward-looking statements.

All of the forward-looking statements are qualified by the assumptions that are stated or inherent in such forward-looking statements, including the assumptions referred to below and elsewhere in this document. Although we believe that these assumptions are reasonable, having regard to our experience and our perception of historical trends, this list is not exhaustive of the factors that may affect any of the forward-looking statements and the reader should not place undue reliance on these assumptions and such forward-looking statements. Current conditions, economic and otherwise, render assumptions, although reasonable when made, subject to greater uncertainty. The additional key assumptions that have been made include, among other things, assumptions with respect to our ability to successfully complete, integrate and realize the anticipated benefits of our already completed and future acquisitions and divestitures, and that we will be able to implement our standards, controls, procedures and policies in respect of any acquired businesses and to realize the expected synergies; that future business, regulatory and industry conditions will be within the parameters expected by us, including with respect to prices, margins, demand, supply, product availability, supplier agreements, availability and cost of labor and interest, exchange and effective tax rates; assumptions with respect to global economic conditions and the accuracy of our market outlook expectations for 2022 and in the future; our expectations regarding the impacts, direct and indirect, of the COVID-19 pandemic on our business, customers, business partners, employees, supply chain, other stakeholders and the overall global economy; our expectations regarding the impacts, direct and indirect, of the conflict between Ukraine and Russia on, among other things, global supply and demand, energy and commodity prices; interest rates, supply chains and the global economy; the adequacy of our cash generated from operations and our ability to access our credit facilities or capital markets for additional sources of financing; our ability to identify suitable candidates for acquisitions

and divestitures and negotiate acceptable terms; our ability to maintain investment grade ratings and achieve our performance targets; our ability to successfully negotiate sales contracts; and our ability to successfully implement new initiatives and programs.

In respect of our GHG emissions reduction, Carbon Program and other sustainability and climate-related initiatives and targets, we have made assumptions with respect to, among other things: that such target is achievable by deploying capital into, among other things, the Geismar low-carbon project and N₂O abatement at our nitric acid production facilities, energy efficiency improvements, carbon capture, utilization and storage, the use of natural gas to generate electricity and waste heat recovery; our ability to successfully deploy capital and pursue other operational measures and opportunities, including the successful application to our current and future operations of existing and new technologies; the successful implementation by us of proposed or potential plans in respect thereof; projected capital investment levels, the flexibility of our capital spending plans and the associated sources of funding; our ability to otherwise implement all technology necessary to achieve our GHG emissions reduction and other sustainability and climate-related initiatives and targets; and the development, availability and performance of technology and technological innovations and associated expected future results.

Events or circumstances that could cause actual results to differ materially from those in the forward-looking statements include, but are not limited to: general global economic, market and business conditions; failure to complete announced and future acquisitions or divestitures at all or on the expected terms and within the expected timeline; climate change and weather conditions, including impacts from regional flooding and/or drought conditions; crop planted acreage, yield and prices; the supply and demand and price levels for our products; governmental and regulatory requirements and actions by governmental authorities, including changes in government policy (including tariffs, trade restrictions and climate change initiatives), government ownership requirements, changes in environmental, tax and other laws or regulations and the interpretation thereof; political risks, including civil unrest, actions by armed groups or conflict and malicious acts including terrorism; the occurrence of a major environmental or safety incident; innovation and cybersecurity risks related to our systems, including our costs of addressing or mitigating such risks; counterparty and sovereign risk; delays in completion of turnarounds at our major facilities; interruptions of or constraints in availability of key inputs, including natural gas and sulfur; any significant impairment of the carrying amount of certain assets; risks related to reputational loss; certain complications that may arise in our mining processes; the ability to attract, engage and retain skilled employees and strikes or other forms of work stoppages; the COVID 19 pandemic, including variants of the COVID 19 virus and the efficiency and distribution of vaccines, and its resulting effects on economic conditions, restrictions imposed by public health authorities or governments, including government-imposed vaccine mandates, fiscal and monetary responses by governments and financial institutions and disruptions to global supply chains; the conflict between Ukraine and Russia and its potential impact on, among other things, global market conditions and supply and demand, energy and commodity prices; interest rates, supply chains and the global economy generally; and other risk factors detailed from time to time in Nutrien reports filed with the Canadian securities regulators and the SEC in the United States.

The forward-looking statements in this document are made as of the date hereof and Nutrien disclaims any intention or obligation to update or revise any forward-looking statements in this document as a result of new information or future events, except as may be required under applicable Canadian securities legislation or applicable US federal securities laws.



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JUNE 2022

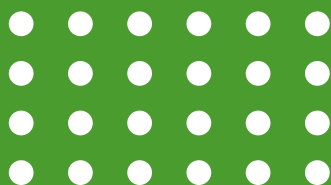
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