

OPERATIONAL PERFORMANCE



2023 marked another year of record-breaking production and sales for PhosAgro. We manufactured 11.3 mt of agrochemicals and supplied 11.1 mt to our customers. Both figures demonstrate an increase of about 2% over our 2022 successes.

Production of phosphate-based fertilizers escalated to 8.4 mt (up 2% y-o-y), and nitrogen-based

fertilizers saw an even slightly more rapid increment, with a 2.3% yearly rise to 2.6 mt. Our nimble response to shifts in market demand continued, with adjustments made to our production and logistics workflows to accommodate changing consumer needs. In 2023, PhosAgro's output of DAP/MAP surged by 8.4%, ammonium nitrate by 4.4%, and APP by a whopping 75.2%. That said, we marginally curtailed the production of NPK and NPS fertilizers to most effectively align with the market environment and thereby maximise the profitability of our manufacturing and sales activities.

The boost in output and product shipments to our customers was comprehensively backed by the relevant upscale in chemical feedstock production (chiefly sulphuric and phosphoric acid), where we also achieved a 2% increase in volumes compared to 2022.

But there is one thing that stands out as a source of particular pride. The Company perpetually refines its corporate occupational safety culture, engaging in daily efforts to improve working conditions and elevate the safety of our manufacturing processes. We are proud to highlight the significant achievement of completing the year 2023 without any major incidents, including accidents and fires.

11.3 mt
of agrochemical products manufactured

8.4 mt
of phosphate-based fertilizers and feed phosphates produced in 2023
+2.0% y-o-y

2.6 mt
of nitrogen-based fertilizers produced in 2023
+2.3% y-o-y



Alexander Gilgenberg
General Director of Apatit

PRODUCT PORTFOLIO

PHOSAGRO IS THE LARGEST PRODUCER OF LIQUID NITROGEN-PHOSPHORUS FERTILIZERS IN RUSSIA

Mineral fertilizers

APAVIVA®
Nitrogen-phosphorus and complex fertilizers

APAVIVA+
Nitrogen-phosphorus and complex fertilizers with micronutrients

NITRIVA®
Nitrogen-based fertilizers

APALIQUEA®
Liquid complex fertilizer



OUR CUSTOMERS
are at the heart of our business.

In 2023, we diversified our product mix to encompass **58 grades, covering varied fertilizers**, feeds, and other products enjoying robust market demand. A significant portion of our offering consists of newest fertilizer grades developed over the past five years.



Feed additives

NITRIVA® Feed
Feed grade urea

APAFEED®
Feed grade monocalcium phosphate

Industrial phosphates

Sodium triphosphat



Industrial products

ApaSil



Apagips/Technogips



Concentrates

High-grade phosphate rock

Syenite alkali aluminium concentrate

Nepheline concentrate

UPSTREAM AND DOWNSTREAM

UPSTREAM

SASB RT-CH-000.A

Kirovsk Branch of Apatit mines apatite-nepheline ore at six fields of the Khibiny deposits in Russia’s Murmansk region using both underground and open-pit mining methods. PhosAgro Group’s feedstock reserves are of igneous origin, which means that they do not

have concentrations of toxic heavy metals. The Company’s phosphate rock is extremely rich in P2O5. The mineral resource base (including off-balance reserves) at one of the world’s richest and purest deposits is expected to last for about 60 years.

77.0%
of ore coming from open-pit mining in 2023

39.2 mt
total apatite-nepheline ore production in 2023

PhosAgro Group’s ore reserves as at 1 January 2024

Deposit	Balance reserves, kt (A+B+C1+C2)	Average P ₂ O ₅ content, %
Kukisvumchorr	335,180	14.12
Yukspor	447,413	13.76
Apatitovy Cirque	79,900	13.58
Rasvumchorr Plateau	351,883	12.06
Koashva	249,922	17.28
Njorkpahk	52,729	14.25
Total	1,517,027	14.03

At the close of 2023, reserves at the Rasvumchorr Plateau saw an augmentation attributable to the allocation of reserves from the unallocated area under licence MUR 00892 TE. Conversely, for other deposits, there was a decline in balance reserves from the previous year, which aligns with the extracted ore volumes.

Currently, the Company is shifting its resource base development profile from open-pit mining to a higher share of underground mining. In the reporting year, the share of open-pit mining came in at 77%.

The total apatite-nepheline ore production in 2023 nearly matched the preceding year, with a marginal decrease of less than 0.8% to 39.2 mt from 39.5 mt in 2022.

A significant development in October 2023 was the launch of the second start-up facility (Yukspor flank)

at the Kirovsky mine, signifying a milestone in the Construction of +10 m level project. The effort involved roughly 2,000 specialists from more than 50 contractors. These were underground works, melding bleeding-edge technologies with exceptional technical solutions, inclusive of ballastless railway tracks and high-capacity rolling stock. The crushing and delivery equipment utilises durable materials and pioneering technologies to extend useful life, while state-of-the-art equipment bolstered the productivity of the continuous handling system for both the Kukisvumchorr and Yukspor flanks. The facility will help us compensate for diminishing ore volumes and ramp up ore production at the Kirovsky mine to 25 mt per annum over the next triennium, an 8.6% increment relative

to existing production figures. The total investment earmarked for this project is estimated at RUB 38.4 bln.

In 2023, the Company continued with the investment project to construct a new mine for the Rasvumchorr Plateau deposit.

The project encompasses the construction of two start-up facilities. The first one at the +430 m level with a 4 mt capacity is set to commence ore extraction in 2Q 2025. The second one at the +310 m level is slated for launch in 2031, with a maximum production capacity of 6 mt by 2035. The total capital investment for this venture is estimated at roughly RUB 37.7 bln.

By year-end 2024, underground mining is to begin within the Gakman block of the Kirovsky mine’s Yukspor deposit.

On top of that, we remain committed to the active implementation of our sustainable development strategy. In 2023, the mining and processing plant of Apatit consumed a total of 300 million kWh of green electricity. The share of its output produced using green electricity generated by the hydroelectric power plants of TGC-1 increased to 18.1%.

18.1%
the share of its output produced using green electricity generated by the hydroelectric power plants of TGC

CHEMICAL PRODUCTION

FEEDSTOCK

Production volume, kt

Item	2021	2022	2023	Δ 2023/2022,%
Ammonia	1,931.10	1,985.30	1,982.80	−0.13
Phosphoric acid	2,952.00	3,199.40	3,345.30	4.6
Sulphuric acid	7,352.20	7,920.20	8,120.00	2.5
Ammonium sulphate	259.00	322.60	260.20	−19.3
Total	12,494.30	13,427.60	13,708.30	2.1



In 2023, the production of phosphoric acid, the key feedstock used in phosphate fertilizers, reached

3.3 mt, increasing by 4.6% y-o-y on the back of earlier production unit upgrades and increased equipment utilisation efficiency.



In 2023, sulphuric acid production was up by 2.5% y-o-y to

8.1 mt.

This was fuelled by greater efficiency of sulphuric acid production in Cherepovets and the launch of a new sulphuric acid facility in Balakovo in late 2023.



Ammonia output was virtually flat

y-o-y at nearly 2 mt.



The decline in ammonium sulphate output in 2023 can be attributed to the scaled-down production of NPS grades in line with the market environment.

8.6 mt

of ore total production at the Vostochny mine in 2023

The Company proceeded with its Vostochny mine development project seeking to intensify open-pit mining. In 2023, the project boosted the Vostochny mine’s production capacity to 8.6 mt of ore annually. The target to further develop and increase the Vostochny mine’s production was revised to 9.5 mt by 2027, as outlined in the updated Programme for the Development of the Ore and Raw Material Base of Apatit’s Kirovsk Branch for 2019–2035.

PHOSPHATE-BASED FERTILIZERS

The year of 2023 saw a 2% annual increase in phosphate fertilizer production, reaching close to 8.4 mt, bolstered by elevated outputs of both phosphoric and sulphuric acids, with ammonia production maintaining high levels.

Production of primary DAP/MAP fertilizer grades rose by 8.4%, setting a new record of over 4.5 mt. Of special note, MAP output surge by 12.9% y-o-y came,

among other things, from the new production facility in Volkhov, erected as part of the Company’s long-term development programme.

In response to market demands, interchangeable NPS, NPK, and APP phosphate fertilizers varied as follows in 2023: a 19.6% decline in NPS production and a 3.5% reduction in NPK output, whereas APP production remarkably soared by 75.2%.

8.4^{mt}
of phosphate fertilizers and feed phosphates produced in 2023
+2.0% y-o-y

>4.5^{mt}
production of primary DAP/MAP fertilizer grades in 2023
+8.4% y-o-y

Phosphate-based fertilizers production, kt

Item	2021	2022	2023	Δ 2023/2022,%
DAP/MAP	3,610.7	4,191.9	4,545.0	8.4
NPK	3,111.3	2,553.8	2,463.8	−3.5
NPS	561.6	1,003.1	806.9	−19.6
APP	208.6	114.0	199.7	75.2
MCP	390.6	361.6	373.3	3.2
PKS	10.8	–	–	–
Total	7,893.6	8,224.4	8,388.7	2.0

NITROGEN-BASED FERTILIZERS

In 2023, production in the nitrogen segment went up by 2.3% y-o-y to 2.6 mt. Production of granulated

ammonium sulphate, urea, and ammonium nitrate gained 1.3%, 1.6%, and over 4%, respectively.

2.6^{mt}
production in the nitrogen segment in 2023
+2.3% y-o-y

Nitrogen-based fertilizers production, kt

Item	2021	2022	2023	Δ 2023/2022,%
Ammonium nitrate	694.8	693.0	723.4	4.4
Urea	1,643.2	1,688.2	1,714.4	1.6
Ammonium sulphate	74.1	165.4	167.5	1.3
Total	2,412.1	2,546.6	2,605.3	2.3

OTHER PRODUCTS

Output of other marketable products, which primarily includes sodium tripolyphosphate and sodium silicofluoride, amounted to 286 kt, down 5.2% y-o-y.

SALES

In 2023, PhosAgro Group increased total fertilizer and feed phosphate sales by 1.7% y-o-y to hit an all-time high of 11.1 mt.

Sales of phosphate-based fertilizers amounted to 8.6 mt, up 2.1% y-o-y. The increases came on the back of strong demand for these fertilizers in the Latin America markets.

8.6^{mt}
of phosphate-based fertilizers and feed phosphates sold by PhosAgro Group in 2023
+2.1% y-o-y

We were able to meet the growing demand by boosting MAP production in 2022 after launching a new facility at the Volkhov site.

In the nitrogen segment, sales were up by 0.4% y-o-y, due to a high seasonal demand and the availability of fertilizers for end users.

11.1^{mt}
total fertilizer and feed phosphates sold by PhosAgro Group in 2023
+1.7% y-o-y

Within the Russian market, a focal point for PhosAgro Group, deliveries saw a 12% increase, equivalent to an additional 0.2 mt. This uptick was instrumental in boosting the total sales figures for 2023 by 1.7%.

Sales by key product, kt

Item	2021	2022	2023	Δ 2023/2022,%
Phosphate-based fertilizers				
DAP/MAP	3,564.5	4,272.2	4,503.6	5.4
NPK	3,011.1	2,660.7	2,696.0	1.3
NPS	566.8	1,008.8	803.9	−20.3
APP	206.3	111.6	198.1	77.5
MCP	405.2	349.5	376.6	7.8
PKS	8.5	–	–	–
Total	7,762.4	8,402.8	8,578.2	2.1
Nitrogen-based fertilizers				
Ammonium nitrate	798.0	661.6	688.3	4.0
Urea	1,616.3	1,741.8	1,698.5	−2.5
Ammonium sulphate	80.2	147.4	173.7	17.8
Total	2,494.5	2,550.8	2,560.5	0.4
Total fertilizers	10,256.9	10,953.6	11,138.7	1.7
Other products				
STPP	94.4	48.6	61.7	27.0
Other ¹	133.0	130.9	153.1	17.0
Total other products	227.4	179.5	214.8	19.7

¹ The portfolio of other products expanded in 2023 to incorporate aluminium fluoride, sulphuric acid, phosphoric acid, sodium silicofluoride, and aluminium sulphate. Sales of these new products for both 2021 and 2022 have been retrospectively adjusted to reflect this change.