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The 2026 African Agriculture Barometer

Fertilizers

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Editorial

By 2050, Africa's population will have almost doubled. Feeding the continent will require producing more on the same land, without depleting it further year after year. Yet African soils have been quietly losing fertility for the past sixty years, due to insufficient and unbalanced nutrient applications.

The issue may sound technical, but the stakes are profoundly political. Food sovereignty cannot be built on depleted soils. 65% of Africa's arable land is degraded. Twenty-four countries apply less than 10 kilograms of fertilizer per hectare, compared to a global average of 135 kilograms. Meanwhile, Africa exports more than 80% of the mineral fertilizers it produces.

The continent faces a double dependency: an avoidable one on nitrogen and phosphorus, which it produces but does not sufficiently channel towards its own markets; and a structural one on potash, for which no mineral deposit is currently being exploited, even though it is the nutrient most lacking in African soils. Every year, African soils lose four times more potassium than they receive.

The continental policy framework has also changed in nature. In 2024, the Nairobi Declaration on Fertilizers and Soil Health, adopted by African Union Heads of State, committed the continent to tripling its production of certified organic and mineral fertilizers by 2034. Whereas the 2006 Abuja Declaration set a volume target, Nairobi shifts the ambition towards nutrient applications tailored to diverse soils and climates.

In 2025, during negotiations on the Kampala Declaration for the Development of Agriculture in Africa, farmers' organizations called for a dedicated agroecology framework. The resulting 2026–2035 continental strategy sets out six goals, including the intensification of sustainable food production and the resilience of agrifood systems. Agroecological practices for managing and restoring soil fertility therefore have a crucial role to play. Family farmers and farmers' organizations already combine mineral and organic fertilization in ways that reflect the diversity of local soils. Their voices must now be heard in the design of national agricultural investment plans to implement these commitments.

None of this will be achieved without farmers themselves; without coherent, sustained public action; or without responsible investment that supports domestic and continental markets.

This Barometer is a decision-support tool, not an end in itself. Restoring the fertility of African soils is a multi-decade undertaking. Those of us who work the land know this: soil that is nourished today secures tomorrow's harvest.



Phenias **NDLELA GUMEDE**,
Farmer in South Africa;
President of PAFO



Pascal **LHEUREUX**,
Farmer in France;
President of the FARM Foundation



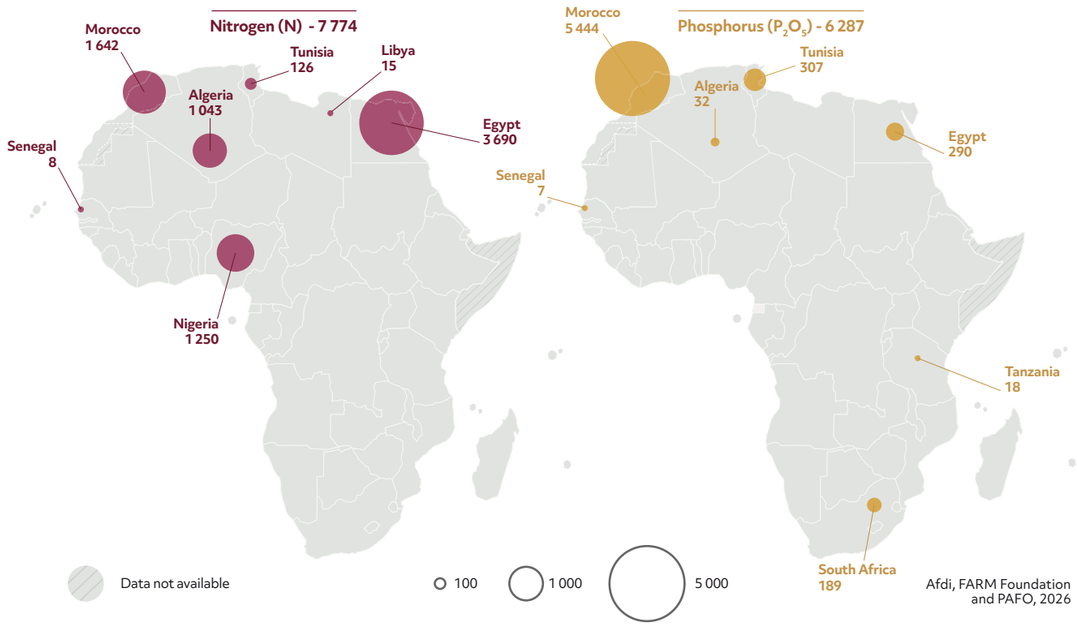
Sophie **FONQUERNIE**,
Farmer in France;
President of Afdi

Production

African mineral fertilizer production has expanded significantly in recent years. Between 2013 and 2023, Africa nearly doubled its nitrogen production, from 4 to 7.8 million tons, and its phosphorus production (phosphorus pentoxide), from 3.3 to 6.3 million tons.

Mineral fertilizer production by African country and nutrient

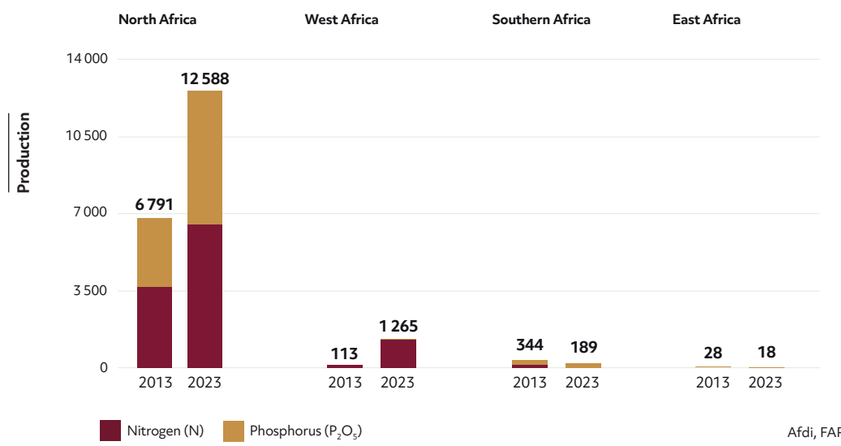
FAOSTAT, 2023, thousand tons of nutrients



Afdi, FARM Foundation and PAFO, 2026

Regional distribution of African nitrogen and phosphate fertilizer production

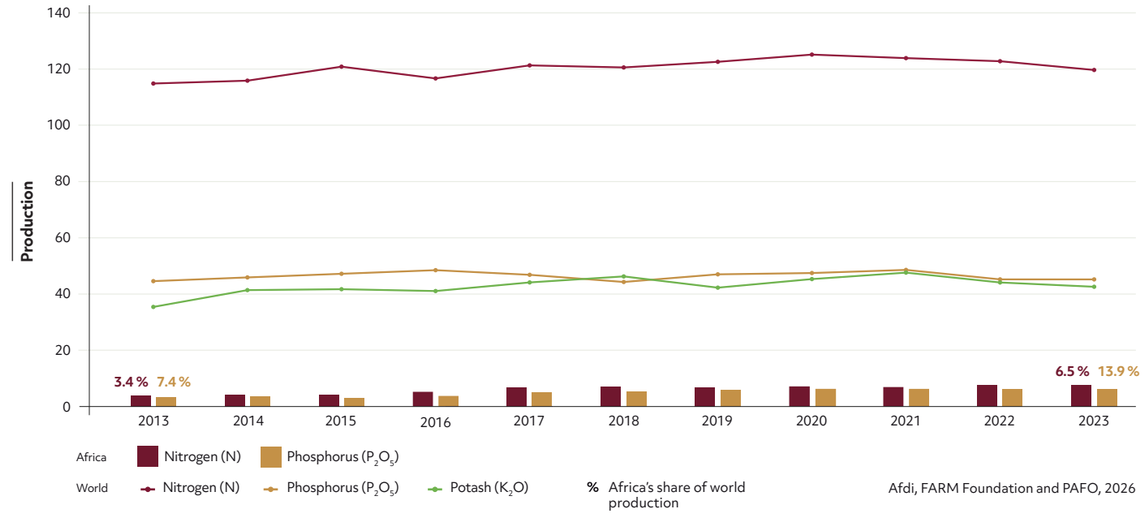
FAOSTAT, 2013 and 2023, thousand tons of nutrients



Afdi, FARM Foundation and PAFO, 2026

Global and African production of plant nutrients

FAOSTAT, 2013–2023, million tons of nutrients and percentage



Afdi, FARM Foundation and PAFO, 2026

This growth has been driven by two nutrients: nitrogen and phosphorus. In 2023, Africa did not produce any potash fertilizer because it had no commercially exploitable reserves. Gabon has reported resources, but their commercial viability remains uncertain. This is a strategic blind spot at a time when the continent imports all of its potash.

Rising output meets to a certain extent the domestic demand, driven by rapid population growth and the need to sustainably intensify agricultural production on degraded soils. 65% of Africa's arable land is degraded, including 19% that is severely degraded.

At the global level, Africa remains an emerging player. It accounts for only 6.5% of nitrogen production and 14% of phosphorus production. Its larger share in phosphorus reflects Morocco's position, as it holds nearly 70% of global reserves. China, despite being far less well endowed, remains the world's leading producer. Yet, despite its emerging status, Africa was the only net driver of global phosphorus production growth over the past decade. While the rest of the world lost 2.35 million tons of production, Africa gained 2.97 million tons. Without this contribution, global phosphorus production would have declined.

Production of both nutrients remains highly concentrated. North Africa accounts for 84% of nitrogen production, based on Egyptian and Algerian natural gas, and 97% of phosphorus production. West Africa has made a striking breakthrough in nitrogen, led by Nigeria: its share rose from under 3% in 2013 to 16% in 2023. The net increase in nitrogen production (+3.99 Mt) was shared among four countries: Nigeria (29%), Morocco (28%, through imported ammonia for formulation rather than primary production), Egypt (26%) and Algeria (24%). Meanwhile, production collapsed in Libya (-93%) and declined in Tunisia (-32%).
The situation is very different for phosphorus. Morocco alone drove the continent's net increase, offsetting the decline of other producers. Its production rose from 2 to 5.4 Mt (+172%).

This production growth should not be confused with progress in domestic fertilizer use. Despite substantial efforts over the past decade, Africa remains the continent with the lowest consumption of mineral fertilizers worldwide, with a large share of production destined for external markets. Increased production does not therefore mean that African soils are better nourished.
Three trends will shape the coming decade. OCP in Morocco aims to raise its fertilizer production capacity to 20 Mt by 2027, from 12 Mt today. The absence of locally produced potash will continue to expose the continent to geopolitical shocks in import markets. Finally, the Nigerian nitrogen-production model, based on access to gas resources, will be difficult to replicate elsewhere in sub-Saharan Africa.

The fertilizer map redrawn by wind and sun

Fertilizer nitrogen is derived from ammonia (NH_3), produced by combining hydrogen obtained from gas with nitrogen from the air. Green ammonia could change this equation: it can be produced by electrolysis powered by renewable energy. Wind and solar energy would then become feedstocks in their own right. Morocco aims to produce 1 Mt of green ammonia by 2027, combining geological and climate-related advantages. Mauritania and Namibia, absent from fertilizer production statistics in 2023, have become hosts to large-scale green hydrogen and ammonia projects. They could emerge as new producers.

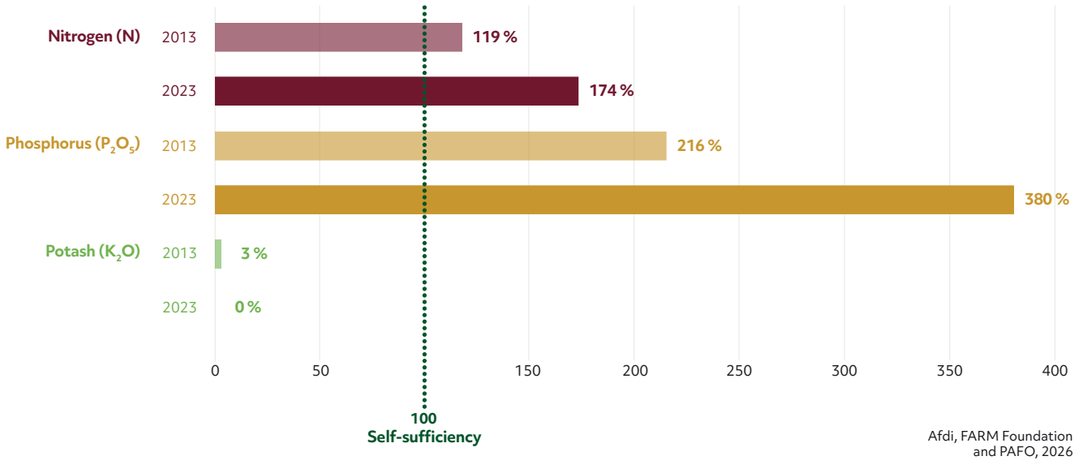
Main sources: FAOSTAT; Forbes Africa; OCP; IRENA; USGS Minerals Yearbook, 2019–2021.

Trade

In 2023, the continent recorded a USD 5.9 billion fertilizer trade surplus. In the same year, more than 80% of the mineral fertilizers produced in Africa left the continent, compared to 87% in 2013.

Africa's theoretical fertilizer self-sufficiency rate

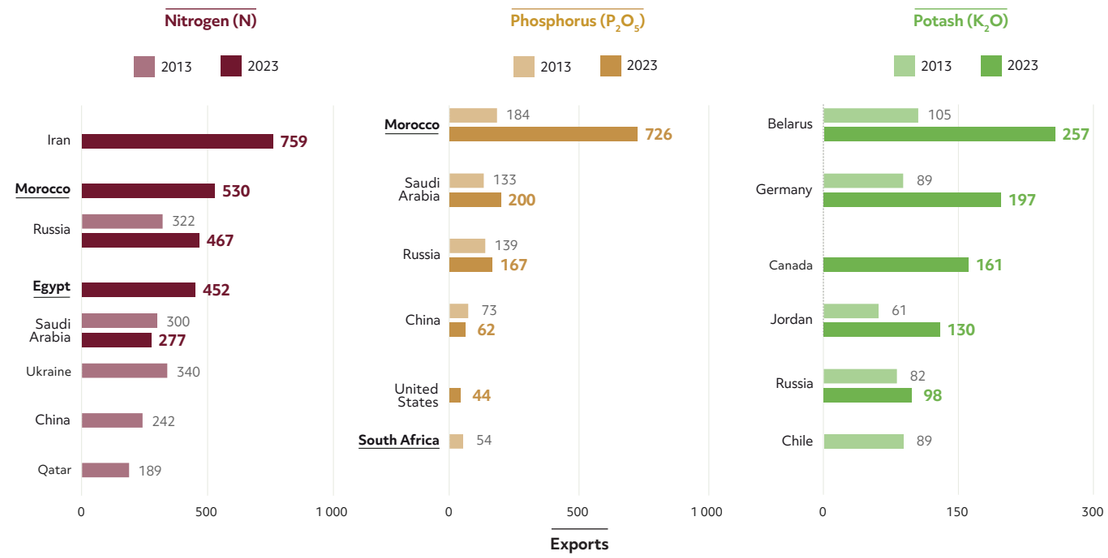
FAOSTAT, 2013 and 2023, %
Calculation: (production / consumption) × 100



Afdi, FARM Foundation and PAFO, 2026

Top 5 nitrogen, phosphate, and potash fertilizer suppliers to Africa

FAOSTAT, 2013 and 2023, thousand tons of nutrients

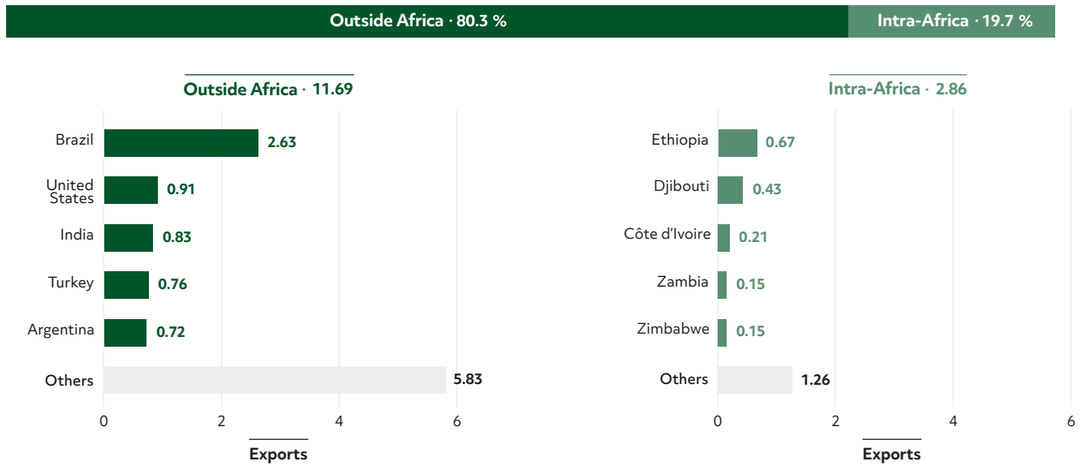


The absence of a bar indicates that the country did not rank in the top 5 for that year, not that the volume was zero.

Afdi, FARM Foundation and PAFO, 2026

Destinations of exported fertilizers produced in Africa

FAOSTAT, 2023, million tons of nutrients ($N + P_2O_5 + K_2O$)



Afdi, FARM Foundation and PAFO, 2026

In 2023, Africa exported USD 14.7 billion worth of fertilizers and imported USD 8.8 billion. This surplus primarily reflects the export specialization of a small number of countries, while most national markets remain dependent on imports.

Global fertilizer trade has been profoundly reshaped. Among Africa's five leading nitrogen suppliers, only Russia and Saudi Arabia remained in the ranking between 2013 and 2023. Ukraine had disappeared from the top five suppliers by 2023, while Iran became the leading supplier that same year. Two countries at war in 2026 have thus replaced one another, a sign of pronounced geopolitical volatility. Morocco and Egypt entered the top five nitrogen suppliers, whereas no African country featured in the ranking in 2013.

For phosphorus, Morocco has remained in first place since 2013 and the gap has widened: its share among the top five suppliers rose from 32% to 61%, and its volume in 2023 was 3.6 times that of the second-largest supplier.

The reshaping has been more marked for potash. Canada, absent from the ranking in 2013, ranked third in 2023, accounting for 19% of the top five's volumes. This rise is consistent with its position: Canada is already the world's leading producer of potash fertilizers and holds the world's second-largest potash reserves, after Russia.

These shifts reveal a deeper paradox. In 2023, Africa had a theoretical self-sufficiency rate of 174% for nitrogen and 380% for phosphorus. However, this surplus is concentrated in a handful of countries (Morocco, Egypt and Nigeria) and is exported.

The major producers, OCP in Morocco, and Dangote and Indorama in Nigeria, primarily target external markets that are more accessible logistically and offer higher returns. Brazil is the leading global destination for African fertilizers by volume, with imports increasing by 57% over ten years. Some major African exporters nevertheless remain fertilizer importers because their industries are specialized in particular products, such as phosphates rather than potash or urea.

South Africa is now the continent's largest fertilizer importer from all origins over 2019–2023 (USD 918 million), followed by Ethiopia (USD 734 million) and Zambia (USD 541 million). Heavy reliance on imported fertilizer exposes agricultural systems to price shocks and international logistical disruptions, with immediate effects on production costs. This weakens agricultural value chains, particularly livestock and input-intensive food-crop systems. In the absence of local production alternatives, it also places sustained pressure on public finances. This vulnerability is even more concerning because these countries are among those most exposed to food insecurity.

The concentrated potash fertilizer market

Africa remains dependent on a concentrated global potash market: Canada, Russia, China and Belarus account for 76% of production and 69% of global reserves. This concentration is increasing in the continent's actual sourcing patterns: the five largest suppliers represented about 50% of African imports in 2013, compared to more than 67% in 2023. This exposes the continent to price and availability risks that are largely beyond its control amid wars, sanctions and power politics.

Main sources: FAOSTAT; Africa Agriculture Trade Monitor 2025; USGS, 2026.

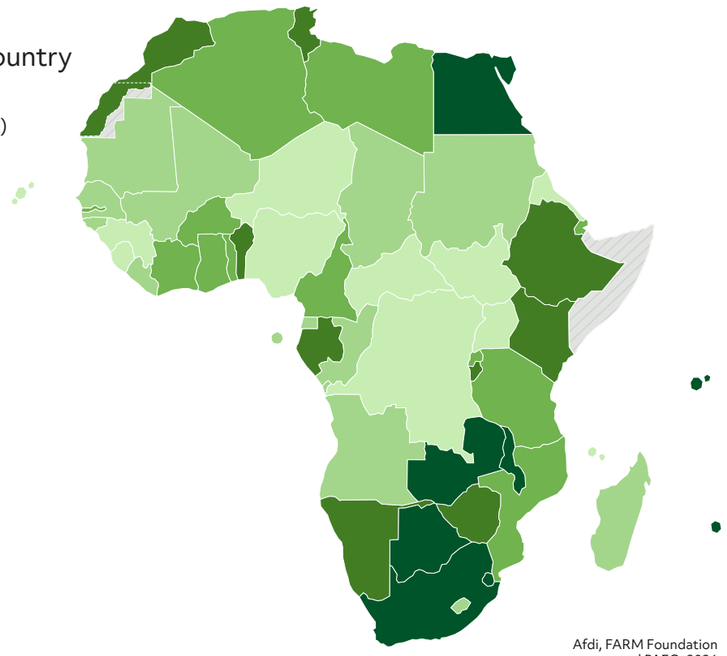
Consumption and availability

Twenty-four African countries out of the 53 analyzed are severely under-fertilized, applying on average less than 10 kg/ha/year of NPK fertilizers. The global average is 135 kg/ha/year.

Average mineral fertilizer consumption by African country and the Abuja target

FAOSTAT, 2023, kg of nutrients (NPK) per hectare of cultivated land

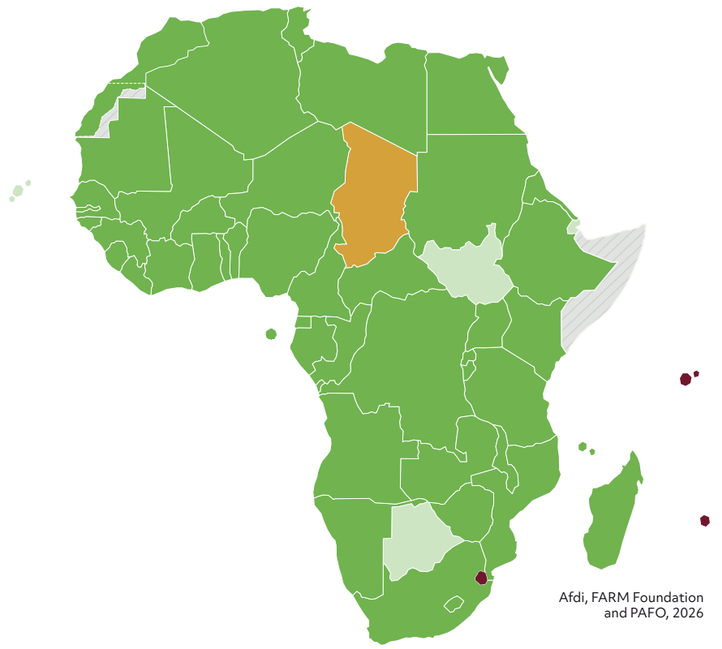
8 out of 53 countries met the Abuja target of 50 kg/ha of nutrients in 2023



Afdi, FARM Foundation and PAFO, 2026

Most deficient nutrient by country

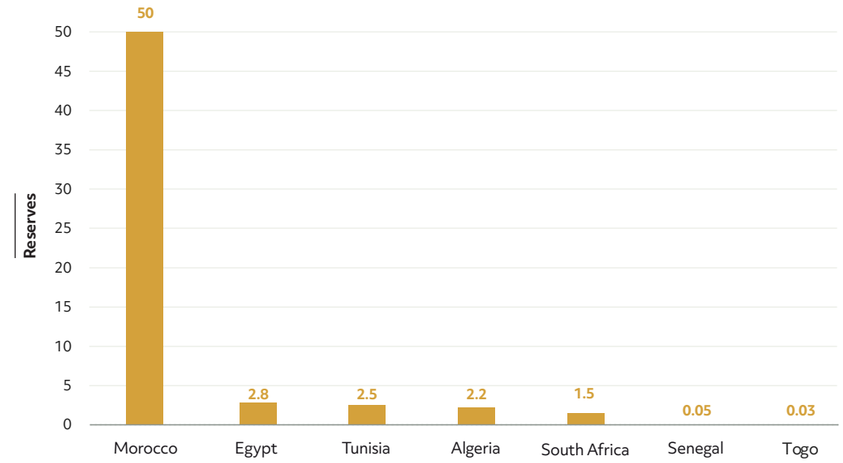
FAOSTAT, 2013–2023 average, net balance of N, P, and K



Afdi, FARM Foundation and PAFO, 2026

Phosphate reserves in Africa

USGS, 2026, billion tons of phosphate rock



Afdi, FARM Foundation and PAFO, 2026

The Abuja Declaration (2006) aimed to revive fertilizer use in a context where soil degradation was estimated to result in USD 4 billion in nutrient losses each year. Its target of 50 kg/ha, compared to 8 kg/ha at the time, remains more of a mobilizing policy threshold than an agronomic optimum. The declaration established a continental average, which was subsequently translated into country targets in 2007 and reaffirmed in the 2014 Malabo Declaration.

Twenty years later, only eight countries have achieved this target. Yet these averages conceal major disparities: input-intensive cash crops, notably in horticultural or irrigated areas, account for a large share of applications, while food-crop farming often remains severely under-fertilized. The challenge is therefore less the average level of use than the highly unequal distribution of fertilizers among farming systems, crops and territories.
Only two countries with phosphate reserves, Egypt and South Africa, are among those that have met the Abuja target. Morocco, despite its phosphate reserves, remains at 40 kg/ha, while Nigeria does not exceed 3.5 kg/ha.

In many countries, fertilizer may be available on the market without being accessible at the right time or suited to the specific characteristics of local soils, which are highly heterogeneous across the continent. Prices, distribution channels, the availability of appropriate formulations, access to credit, the timing of subsidies and seasonal supply patterns all shape farmers' actual use.

The NPK aggregate obscures a more nuanced reality: a surplus of nitrogen or phosphorus can numerically offset a potassium deficit without correcting it in the field. When broken down by nutrient, the indicator shows that Africa's soil-fertility crisis is first and foremost a potassium crisis. Potassium is the most limiting nutrient in 45 of the 53 reviewed countries, sometimes by a substantial margin. Egypt, which far exceeds the Abuja target, is estimated to remove 158 kg/ha/year of potassium from its soils, without this appearing in its aggregate NPK balance. Achieving the Abuja target will therefore not be enough if nutrient applications remain unbalanced, particularly since the continent has no exploited potash reserves. A project in Gabon is attracting growing interest, but preliminary estimates have confirmed neither its industrial viability nor whether its production would serve African markets.

These balances are based on partial data, and some flows are not captured in official statistics: alluvial deposits during floods, undeclared manure, and the diversion of subsidized fertilizer to secondary crops. The figures should therefore be interpreted with caution, without calling into question the scale of the potassium deficit.

Towards more constrained demand than expected?

The objective of increasing yields will depend not only on mineral fertilizer consumption, but also on changing soil health, climate conditions and public policies. In Africa, land degradation could require increased applications simply to maintain current levels of production. Conversely, the rise of biofertilizers, biostimulants, organic fertilizers and "green" subsidy programs could affect demand for mineral fertilizer in some markets. The question is therefore not only how much fertilizer Africa will consume, but which nutrients, for which soils and crops, and through which supply models.

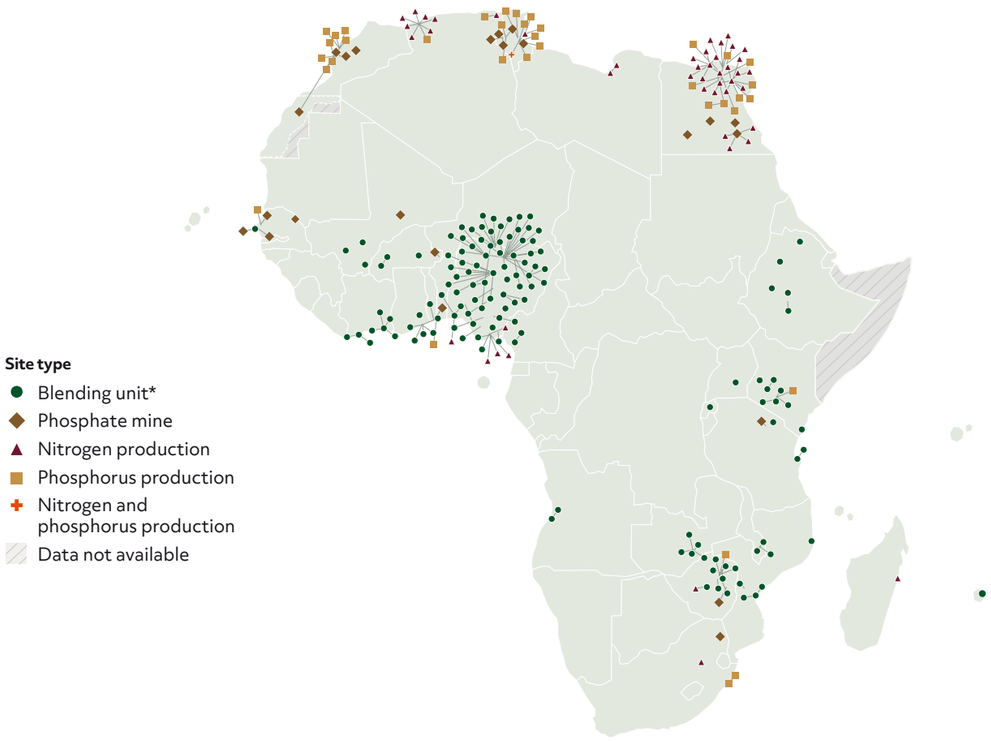
Main sources: FAOSTAT; FAO; Abuja Declaration, 2006; Malabo Declaration, 2014; USGS, 2026.

Investment

Nitrogen fertilizer production capacity in sub-Saharan Africa, excluding South Africa, increased 5.5-fold in a decade, from 1.2 million tons in 2014 to 6.6 million tons in 2023.

Locations of industrial and mining sites in Africa

USGS Minerals Yearbook, 2019–2021; IFDC, 2023

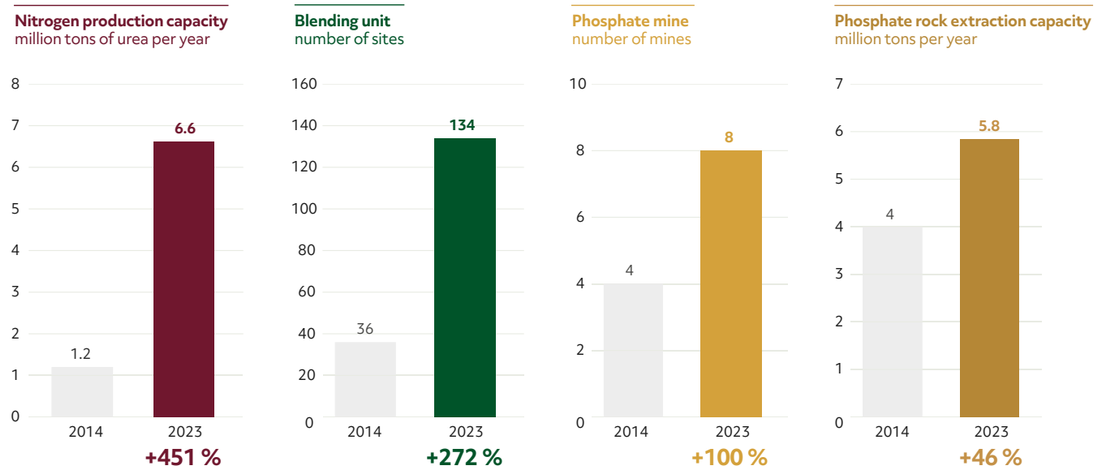


**Blending units: IFDC 2023; Sub-Saharan Africa excluding South Africa; North Africa is not covered by this survey.*

Afdi, FARM Foundation and PAFO, 2026

Evolution in fertilizer production capacity and blending facilities in sub-Saharan Africa

IFDC, 2014 and 2023, excluding South Africa



Afdi, FARM Foundation and PAFO, 2026

Africa has experienced a decade of accelerated industrialization and geographical rebalancing, with Nigeria emerging alongside Morocco and Egypt as a major hub for investment in fertilizer production. In Nigeria, Dangote and Indorama increased their capacity by 5.8 million tons over ten years. However, almost half of this additional capacity came on stream in 2022–2023. Capacity utilization in Nigeria remains at 44%, compared to 85% in Morocco. Morocco's more mature industry processes imported ammonia with locally produced phosphoric acid.

In this landscape, China acts primarily as a financial and technical partner in projects led by African actors through South–South partnerships, as can be seen in the gas agreement between Dangote and GCL Group for a plant in Ethiopia, and in a coal-based fertilizer production project in Zimbabwe. At the same time, fertilizers have again become an issue of sovereignty in European Union–Africa and France–Africa relations. Security of supply, local processing and agricultural value chains have become diplomatic issues.

In the fertilizer sector, the capacity that can be mobilized is decisive. It depends on the availability of feedstocks, transport infrastructure, access to ports or domestic markets, storage, distribution and commercial outlets. These factors determine producers' ability to sell their output and neighboring countries' ability to obtain supplies at a lower cost. A country may have substantial installed capacity but produce or export less than expected if these logistical and industrial links are weak.

Fertilizer industrialization does not rely solely on large integrated plants. It also includes smaller blending facilities, which mix nutrients into fertilizer formulations. In sub-Saharan Africa, excluding South Africa, the number of such sites rose from 36 to 134 between 2014 and 2023; 69 of them in Nigeria. This network can support regional trade, provided it is connected to effective infrastructure. In theory, blending makes it possible to tailor formulations to soils. In practice, its potential remains constrained by a lack of detailed agronomic data, soil mapping, and by logistics chains that are still costly and incomplete.

With OCP aiming to raise its capacity to 20 million tons by 2027 and further expansion announced in Nigeria, the investment wave is not over. One key question is whether solvent African demand will keep pace with expanding supply, and whether infrastructure will make it possible to convert this capacity into intra-African trade rather than exports alone.

Fertilizers: the rise of decentralized production

Alongside mega-plants, smaller and more distributed models are emerging: a modular green ammonia unit in Naivasha, Kenya; rural small-scale blending plants; and pilot plasma nitrogen-fixation projects tested in Uganda, South Africa and Ghana. While still experimental, these solutions point to an important development: fertilizer production is gradually moving closer to areas of consumption.

Main sources: FAO; USGS; IFDC; OCP; Agence Ecofin; Xinhua.

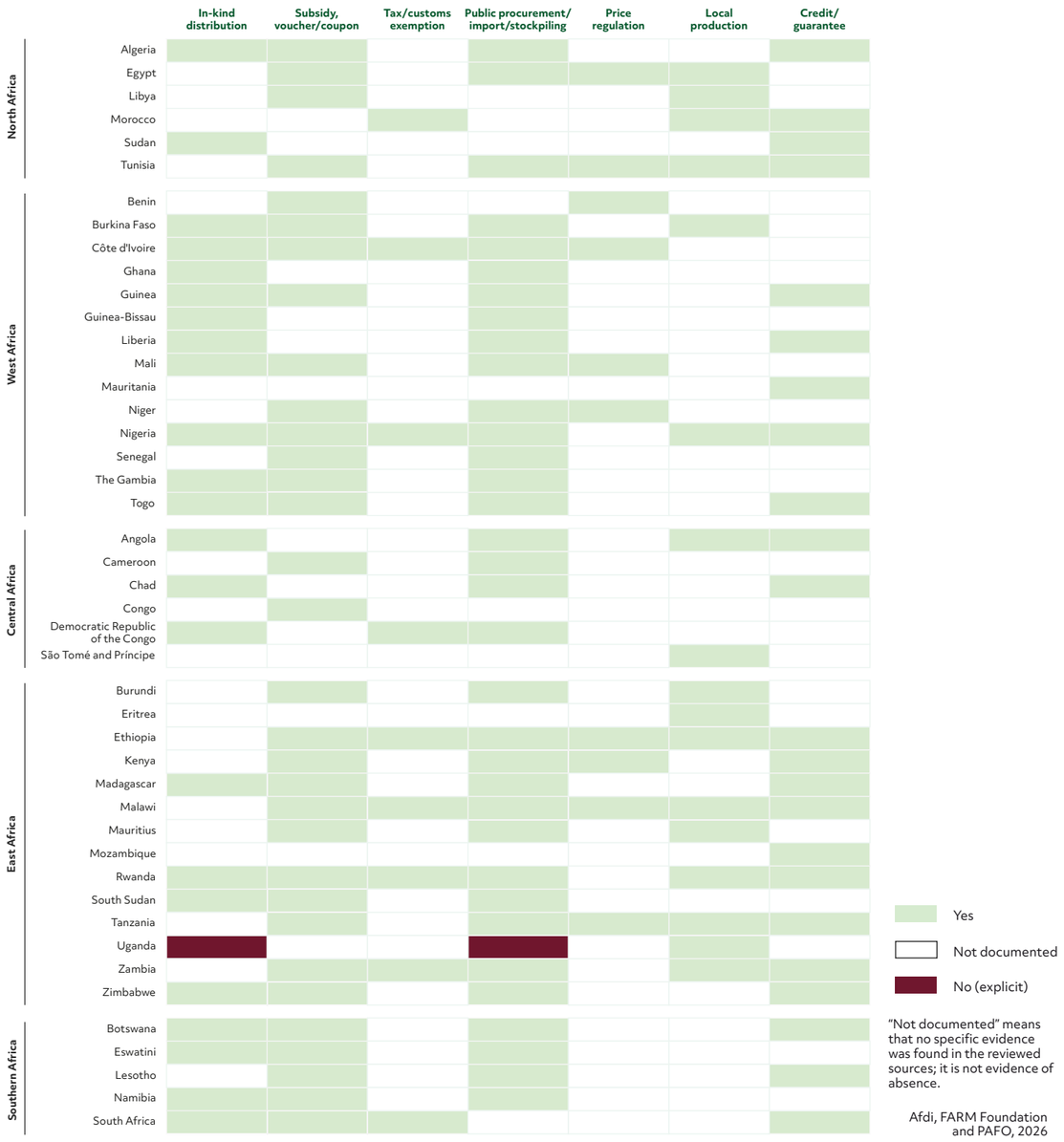
Public policy

At least 45 out of Africa's 54 countries currently regulate the fertilizer market in one way or another through prices, distribution, credit or taxation.

From 2020 to 2024, Africa received an average of USD 4.2 billion in annual public aid for its agriculture, of which only USD 148 million (or 3.5%) was allocated to protecting and restoring its agricultural land.

Types of public support for the fertilizer sector in Africa

FAO-FAPDA; FARM, 2026

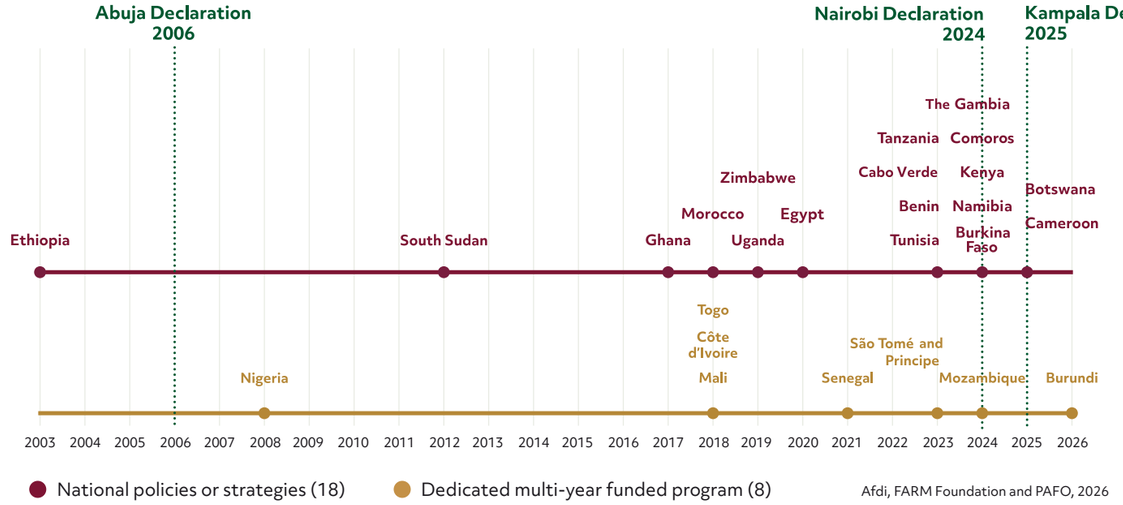


"Not documented" means that no specific evidence was found in the reviewed sources; it is not evidence of absence.

Afdi, FARM Foundation and PAFO, 2026

Initiatives relating to organic fertilizers

Desk research; year of adoption by country



Afdi, FARM Foundation and PAFO, 2026

The diversity of policy instruments confirms that fertilizer remains a strategic lever of agricultural support for many African governments. These instruments aim to improve the economic accessibility of fertilizers, secure and regulate supply, and develop domestic production.

Across 54 countries, public interventions for fertilizers most often consist of control over supply: 34 countries regulate procurement, imports or storage, and 32 subsidize prices. These are the two main instruments. More indirect measures remain rare: tax exemptions, used by nine countries, and price regulation without subsidies, used by ten, each used by about one country out of five. Guaranteed credit and in-kind distribution are implemented in 23 countries (43%). International development partners play as central a role as national credit or distribution mechanisms. However, governments differ substantially in their financial resources and administrative capacity to implement these tools.

Fully liberalized markets are rare and are seldom documented as an explicit policy choice. Uganda appears to be one of the few countries where the absence of public procurement and distribution reflects a stated choice rather than a simple lack of data. Ultimately, the main divide is not between intervention and markets, because almost all countries intervene in one way or another. It is between those that steer the allocation of fertilizer and those that merely cushion its price.

In producer countries, public policies also take an industrial form: administered prices, export quotas, domestic market supply obligations, tax exemptions and investment subsidies. These instruments arbitrate between export rents, domestic supply security and plant utilization rates. Tightening European standards, including the Carbon Border Adjustment Mechanism (CBAM) and nitrate rules, could also compel African exporters to decarbonize faster than their domestic markets require: an external constraint, imported rather than generated by their own regulatory framework.

Budgetary effort remains focused on mineral fertilizers. However, public authorities are beginning to structure an organic fertilizer sector through incentives, standards, credit and investment support, and subsidies, driven by continental commitments. Certified biofertilizers are also being developed and integrated into soil-health policies. Mineral fertilizer alone can correct nutrient deficiencies in the short term, but it improves neither soil structure nor water-holding capacity. The most robust approach combines organic and mineral applications, for both immediate effectiveness and medium-term soil fertility.

Hormuz: price shock and targeted return of public support

The 2025–2026 fertilizer price shock triggered a wave of reforms, but it should primarily be seen as a short-term response to a supply crisis, not as a uniform return to interventionism. Several governments reintroduced or strengthened support: free distribution in Ghana; a federal program of 1.1 million tons in Nigeria; a budget increase in Benin; a possible reinstatement of the VAT exemption in Côte d'Ivoire; nationwide deployment of e-vouchers in Zambia. This sequence shows that fertilizer policy remains highly sensitive to price shocks, and that the balance between support for domestic markets and the preservation of industrial revenues can be rapidly recalibrated.

Main sources: FAO-FAPDA; IFPRI; FARM.

Future challenges

Potassium is being removed from African soils four times faster than it is replenished: 33 kg/ha are removed each year, compared to only 8 kg/ha applied. In 2023, this resulted in a net deficit five times greater than that of nitrogen and ten times greater than that of phosphorus.

Breakdown of nutrient balances in Africa

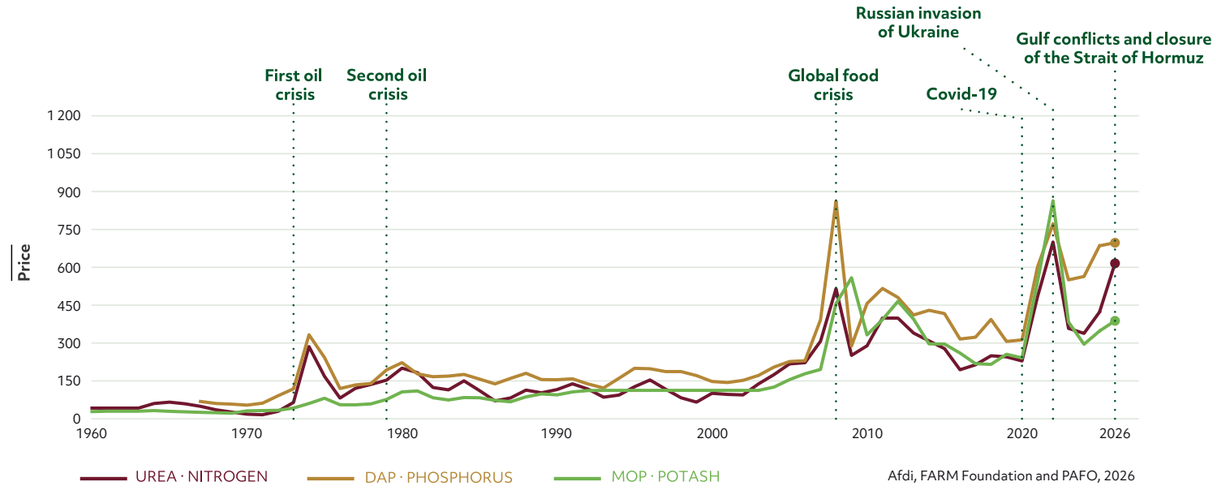
FAOSTAT, 2023, kg of nutrients per hectare of cultivated land



Afdi, FARM Foundation and PAFO, 2026

Evolution in international fertilizer prices

World Bank, January 1960 to June 2026, in current US dollars per ton



Afdi, FARM Foundation and PAFO, 2026

The net nutrient balance confirms that the continent's soil-fertility crisis is first and foremost a potassium crisis. In 2023, soils lost 5.4 kg/ha of nitrogen and 2.5 kg/ha of phosphorus, but 25.2 kg/ha of potassium. These deficits, and the gaps between nutrients, are widening over time. Since 1961, the potassium deficit has increased 2.4-fold, compared to about twofold for the other two nutrients. Nitrogen benefits from an input unavailable to phosphorus and potassium: 30% comes from the symbiotic nitrogen fixation of legumes. However, this mechanism is itself climate-dependent; an analysis of Southern Africa shows that its effectiveness declines by 30–40% under heat stress.

The regional picture is even more concerning. Southern Africa, the continent's largest fertilizer user at 41 kg/ha, has the worst net balance (-30 kg/ha for potassium). North Africa, which is close to nitrogen balance (+1.1), remains equally deficient in potassium (-25). Potassium is also removed with crop residues, including stems and straw. These are increasingly collected for animal feed, fuel or sale rather than left in the field. This pressure is expected to intensify as human and livestock populations grow.

This structural fragility is compounded by short-term vulnerability to global prices, which fluctuate in response to energy and geopolitical crises. The 2021–2022 crisis combined both factors, following Russia's invasion of Ukraine and sanctions targeting Belarus and Russia.

However, world prices are only part of the equation. At the same international price, transport and storage can add 45% to the price paid by a farmer in a landlocked country. In a context as unstable as the current decade, marked by tensions around the Strait of Hormuz, price forecasts become less reliable. Only forward-looking policies (buffer stocks, supplier diversification, and investment in transport and storage) will make it possible to partially absorb these shocks.

Unlocking existing stocks: the potential of biological approaches

Neither phosphorus nor potassium exists in a gaseous form that can be mobilized biologically: atmospheric fixation is impossible for both nutrients. However, soil microorganisms can unlock part of the stock already present but chemically trapped in soils. These include phosphate-solubilizing bacteria (PSB) and potassium-solubilizing microorganisms (KSM). The effect can be significant in both cases: a wheat trial in Pakistan found that PSB inoculation increased phosphorus uptake by 24%, while a global meta-analysis found a similar effect for KSM, with average yield gains of 23%. However, these mechanisms do not create new nutrients; they redistribute a finite stock. PSB and KSM are not silver bullets. They are effective only when combined with regular mineral and organic applications, which remain crucial. It is the combination of biological, mineral, organic and agroecological approaches including the incorporation of crop residues that will determine whether African soil fertility can genuinely improve.

Main sources: FAO; World Bank; Africa Agriculture Trade Monitor 2025; Adnan et al. (2022), Nature; Fan et al. (2025), Frontiers in Plant Science; Chitete et al. (2025), Cogent Food & Agriculture.

Conclusion

Since the 2006 Abuja Declaration, African fertilizer production has grown significantly: nitrogen and phosphorus output has nearly doubled in a decade, and the continent now records a fertilizer trade surplus of USD 5.9 billion. Domestic consumption, however, has increased slowly. Africa remains the least fertilized continent in the world. Producing more has not been enough to replenish African soils. Achieving this will require a action across three key levers: industrial development, commercial strategies and public policies.

The continent has significant assets to draw on: gas resources fueling a booming nitrogen industry in Egypt, Algeria, and Nigeria; renewable energy potential yet to be harnessed; and the world's largest phosphate reserves, located in Morocco. Potash is the exception, with no deposit currently in production. Resources have been identified in Gabon, but whether they can be exploited on an industrial scale remains to be confirmed. This is the structural unknown in the African equation, one confronted with a concentrated and unstable market shaped in particular by conflicts.

Faced with domestic markets that are difficult to reach and offer limited purchasing power, fertilizer producers favor export outlets that are better structured and more profitable, notably in Brazil and Europe. Building a stronger African market will require action on trade policy and on logistics. Transport can add 45% to the price paid by a farmer in a landlocked country. The 2023 Lomé Declaration, moreover, calls for regional trade free of customs duties. This export orientation is compounded by dependence on suppliers that are themselves unstable: Russia, Ukraine and Iran have competed for leading positions among nitrogen exporters as wars and sanctions reshape the market.

Climate change adds another variable to the equation, particularly as heat stress limits the capacity of legumes to fix nitrogen. Another equally structural but underused lever is to close nutrient cycles: returning to soils what the agricultural system already generates, including crop residues, manure, and urban and agro-industrial organic waste. These agroecological practices are straightforward and low-cost. Combined with an additional fertilizer supply adapted to the needs of nutrient-deficient soils, they can have a significant impact, particularly on the potassium deficit, which affects 85% of the countries analyzed.

This situation calls for purposeful governance. Almost all African governments already intervene in fertilizer markets; the challenge is to steer this support toward domestic allocation as much as price cushioning. Farmers' organizations are in a good position to organize local demand. Involving them in the design of support mechanisms, not only in their implementation, will be essential to the effectiveness of reforms.

From Abuja to Nairobi in 2024, the underlying approach has changed: soil fertility must be considered on a case-by-case basis, according to soils, climates and crops, rather than through uniform volume targets for all. This differentiated approach also applies to the respective levers. Mineral fertilizers correct nutrient deficiencies but do not restore soil structure; biological inputs mobilize existing nutrient stocks but do not create new ones; organic inputs improve water retention but do not replace nitrogen. None is sufficient in isolation, and African farmers already combine these approaches in the field.

Resolving this equation requires the co-construction of public and private strategies that are aligned with producers' needs and practices. Only then will farmers have access to a broader range of complementary solutions, the only approach commensurate with the challenge of restoring soil fertility across Africa.

Methodology

Geographical scope

The analysis covers 54 African countries, grouped into five subregions according to the United Nations M49 standard:

- **North Africa (6):** Algeria, Egypt, Libya, Morocco, Sudan and Tunisia.
- **East Africa (18):** Burundi, Comoros, Djibouti, Eritrea, Ethiopia, Kenya, Madagascar, Malawi, Mauritius, Mozambique, Uganda, United Republic of Tanzania, Rwanda, Seychelles, Somalia, South Sudan, Zambia and Zimbabwe.
- **West Africa (16):** Benin, Burkina Faso, Cabo Verde, The Gambia, Ghana, Guinea, Guinea-Bissau, Côte d'Ivoire, Liberia, Mali, Mauritania, Niger, Nigeria, Senegal, Sierra Leone and Togo.
- **Central Africa (9):** Angola, Cameroon, Congo, Gabon, Equatorial Guinea, Central African Republic, Democratic Republic of the Congo, São Tomé and Príncipe, and Chad.
- **Southern Africa (5):** South Africa, Botswana, Eswatini, Lesotho and Namibia.

For the industrial-capacity growth indicator presented in the Investment chapter, North Africa and South Africa are excluded from the 2014–2023 comparison series because IFDC Register data on blending facilities cover sub-Saharan Africa only.

Data sources

Main sources: FAOSTAT (production, trade and consumption); country-level USGS Minerals Yearbook reports (2019–2021; industrial capacity); USGS Mineral Commodity Summaries 2026 (phosphorus reserves); IFDC/AfricaFertilizer Register (2014–2023; production and blending in sub-Saharan Africa, excluding South Africa); World Bank Pink Sheet (urea, DAP and potash prices, 1960–2026; DAP from 1967; nominal prices and methodological breaks in 2020 and 2022); and company reports from OCP, Indorama and Dangote.

Methodological limitations

The analysis is conducted in units of pure plant nutrients - nitrogen (N), phosphorus (P_2O_5) and potash (K_2O) - the only basis that allows fertilizers with different compositions to be compared. USGS data, which refer to 2019, 2020 or 2021 depending on the country, and FAOSTAT data for 2023 do not cover the same year. This time lag is acceptable for production capacity, which is relatively stable, but has greater implications for actual output, which is more volatile. FAOSTAT measures agricultural uses of mineral nutrients only, whereas IFDC and USGS cover all uses, although agriculture remains by far the dominant one. Finally, trade flows rely on bilateral data reported by countries and may contain gaps. Somalia has virtually no usable data. The data used ends in 2023, and the analyses therefore do not account for the impact of recent geopolitical crises, particularly the supply shock caused by the blockade of the Strait of Hormuz.

Main methodological choices

- **Units:** FAOSTAT data are expressed in tons of pure plant nutrients (N, P_2O_5 and K_2O), never in tons of commercial fertilizer products. They should therefore be distinguished from capacity data from IFDC, USGS and companies, which are reported in tons of finished fertilizer. The following conversions are used: urea × 46% = N equivalent; DAP × 18% = N equivalent; DAP × 46% = P_2O_5 equivalent.
- **Investment chapter:** The chapter uses installed production capacity, rather than actual output, as used in the Production chapter.
- **Source discrepancies:** Where USGS and IFDC data diverge, IFDC data were selected because they are more recent.
- **Data cross-checking:** Reported industrial capacity, once converted into nutrient equivalents, was cross-checked against FAOSTAT production data to identify gaps by country and nutrient.

About

AFDI

French Farmers and International Development (Afdi) is an international solidarity association created by French agricultural professional organizations. Afdi provides strategic support to family farming in the Global South, enabling farmers to earn a decent living and to help address the global challenges of food sovereignty and food security. Present in 21 countries across Africa, Asia and the Eastern Caribbean, Afdi conducts strategic partnerships with nearly 70 farmers' organizations and engages French agricultural professionals and their organizations in international cooperation.

FARM

For 20 years, FARM (the Foundation for Agriculture and Rural development in the world), a recognized public-interest foundation, has worked to promote sustainable agriculture worldwide, particularly in countries of the Global South. Through its studies, partnerships and awareness-raising activities, FARM informs public and private stakeholders about pathways towards agricultural development that balances economic, social and environmental priorities.

PAFO

The Pan-African Farmers' Organization (PAFO) represents more than 80 million African farmers. Established in 2010 under the auspices of the African Union, it brings together five regional networks of farmers' organizations, encompassing nearly 73 national organizations in more than 48 countries. It convenes cooperatives, federations and associations to strengthen farmers' role in African agricultural policies and promote a strong and inclusive African agriculture.

Explore more publications and work by FARM, Afdi and PAFO:

- *Tapsoba A. F., Soyez T., Brun M., Faivre-Dupaigre B. 2025. «Comment fertiliser autrement pour une bonne santé des sols : l'exemple du Sénégal», Dialogue de politiques publiques, n° 81, Agence française de développement.*
- *Soyez T. (coord.). 2024. Les enjeux du renouvellement de la fertilité des sols en Afrique de l'Ouest. Approche régionale et études de cas au Bénin et au Sénégal. Etude de la Fondation FARM.*
- *Soyez T., Brun M. 2024. Cartographie des flux du marché des engrais en Afrique de l'Ouest (1990 - 2022). Série de publications de la Fondation FARM.*
- *Fondation FARM et Afdi. 2023. « Hausse des prix et crises géopolitiques : quelle résilience pour les agricultures africaines face aux chocs ?» Policy Brief.*
- *Kouadio B., Nandjui J., Ferraro F. 2023. « Expérimentations agroécologiques sur les filières cacao et maïs en Côte d'Ivoire : synthèse et premiers résultats », Note de synthèse, Projet Vital, Afdi.*
- *Afdi. 2026. « L'agroécologie en action, une dynamique portée par les producteurs », Capitalisation, Projets FO-RI au Burkina Faso & Mali, Afdi.*

Editorial coordination, research, writing and statistical analysis: Thibaut Soyez (FARM), Matthieu Brun (FARM), Maria-Elena Ramirez (Afdi) and Abdoul Tapsoba (FARM Foundation)
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Africa accounts for only 6.5% of global nitrogen production and 14% of global phosphorus production, yet it produces no potash fertilizers. The nutrient most deficient in African soils is absent from the continent's production base, investment pipeline and public-policy agenda. Production almost doubled over the past decade, but it primarily serves export markets, while most farmers remain underserved. Addressing this deficit will require better-targeted public action, deeper regional integration and stronger involvement of farmers' organizations in decision-making. Amid the growing weaponization of the global agricultural and energy sectors, FARM, PAFO and Afdi present, through the 2026 African Agriculture Barometer, an evidence-based analysis of the challenges surrounding fertilizers in Africa to support decision-making and to call for action.

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