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Replacing imported wheat for a stronger Sudan

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Photo of Sudanese bakery in Boulaq, Egypt where we tested breadmaking with local flour

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Replacing imported wheat for a stronger Sudan

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Sudan's dependence on wheat is relatively recent and largely policy driven rather than rooted in long standing dietary traditions. Large scale wheat imports expanded during the 1970s and 1980s through US food aid programs, while government subsidies kept wheat products artificially inexpensive. In 2024, Sudan spent an estimated US\$575 million on wheat imports. At the same time, rapid urbanisation reinforced bread as the dominant urban staple. Together, these dynamics displaced traditional grains such as sorghum and millet that had historically supported Sudan's food security and climate-adapted agricultural systems, leading to the underutilisation of the country's own cereal production potential. This structural reliance on imported wheat has increased Sudan's exposure to economic and food

security shocks. Ongoing conflicts, disruptions in global supply chains, and severe currency depreciation have made wheat imports increasingly costly and unreliable.

In this policy brief we highlight a viable path forward: investing in Sudan's traditional, climate-resilient crops such as sorghum, millet, and pulses. These crops have the potential to reduce foreign currency outflows, lower household food expenditures, contribute to local economic development, and strengthen national nutrition. This on the condition that Sudan can substitute the imported flour currently used by local bakers to produce white bread. This policy brief provides recommendations for decision-makers ready to lead this transition.

Context and rationale

A critical moment for Sudan’s food system

Sudan is currently facing a food security crisis rooted in its overdependence on imported wheat, which supplies over 85% of national wheat consumption. Having displaced traditional climate-resilient local crops, wheat now accounts for over 20% of the national diet. Price spikes and import disruptions have resulted in bread becoming unaffordable for a large share of the Sudanese population.

A pathway through local alternatives

Locally produced alternatives such as sorghum, millet, and various pulses are available. These traditional crops are heat- and drought-tolerant, require fewer inputs, and are culturally accepted. Recent studies show that composite flours derived from these crops can effectively replace imported and refined wheat flour in commonly consumed products such as Sudanese *baladi* breads, as well as in products like *kisra* and *ghurassa*.

Reducing imports to save foreign currency

Current imports

In 2024, Sudan spent an estimated US\$575 million on wheat and wheat flour imports, straining scarce foreign currency reserves (figure 1). Approximately 40% of this sum was spent on wheat flour, representing a volume of 665,000 tons valued at US\$317 million. Continued reliance on imports under high inflation and currency depreciation heightens Sudan’s exposure to global market shocks.

Lowering household food costs

Sudanese households, especially in cities, depend on wheat flour from relatively expensive wheat; often made affordable by making wheat flour from subsidised imported wheat. However, figure 2 shows that Sorghum is constantly available at more affordable prices for consumers at local markets, despite the recent disruptions.

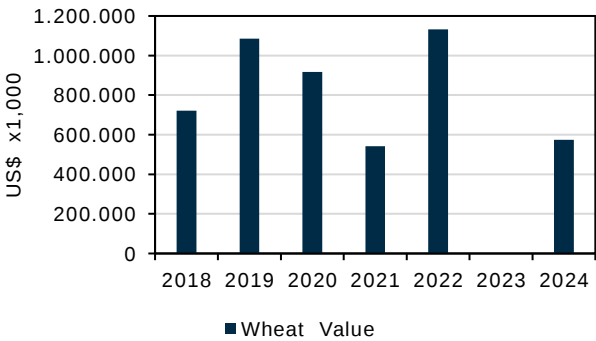


Figure 1 Import value (US\$) of wheat and wheat flour by Sudan
Source: Central Bank of Sudan. In 2023 there was no data reported.

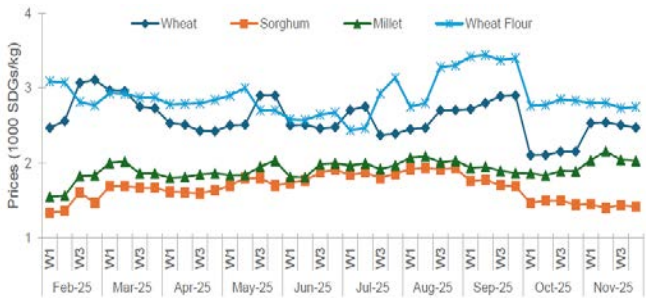


Figure 2 Average consumer price in SDG per kg for wheat, wheat flour, millet and sorghum
Source: IFPRI, 2025.

A recent feasibility study led by the authors of this policy brief shows that composite flours using sorghum, pulses, and psyllium can substitute refined wheat, with positive reactions from industry stakeholders. Adoption of these flours in bread products can reduce annual wheat flour imports and generate substantial foreign exchange savings.

Improving nutrition and building resilience

Better diets from local crops

Composite flours derived from Sudanese sorghum varieties (Tabat, Feterita, Dabar) or millets, pulses (e.g. cowpea) and psyllium as developed in the feasibility study, offer products with positive flavour, texture and taste attributes which connect to the traditions of Sudan’s food culture.



Figure 3 Baladi breads from imported wheat flour (white) versus Sudanese crop flour (brown)

These composite flours offer nutritional benefits over refined wheat flour, especially those based on Sudanese sorghum which are higher in healthy lipids, dietary fibre and essential micronutrients (table 1). Integrating these blends into staple foods such as bread can contribute to more nutrient-dense diets. For example, these bring substantial increases (double-triple) in key nutrients for children and women: folate, iron and zinc.

Table 1 Nutritional value comparison for wheat vs. local flour blend, showing improvements in lipid, dietary fibre and micronutrient levels in local flour

	Unit/ 100 g	Wheat flour refined	Sorghum, cowpea, psyllium	%RDI/100g change	
Water	g	13.4	12,1		
Energy	kJ	1510	1343		
Carbohydrates	g	72.5	65.9		
Sugars	g	0.31	2.7		
Proteins	g	11.98	10.74		
Lysine	g	0.231	0.324		
Lipids	g	1.66	3.1		
Dietary fiber	g	2.40	16.6		
Folate, total	µg	33	68	11	→ 23
Vitamin A	µg	0	0.2		
Calcium	mg	15	20	1.6	→ 2.1
Iron	mg	0.90	3.5	6	→ 22
Zinc	mg	0.85	1.7	12	→ 24

Supporting resilient local economies

To achieve acceptable dough structure, moisture retention and product volume, psyllium must be incorporated at an inclusion rate of about 6.8% per ton of flour. Psyllium is mainly grown in India, and has to be imported. In 2024, with wheat flour imports of 665,000 tons, this would result in a required volume of approximately 22,600 tons of psyllium. The import value of this volume of psyllium from India is estimated at US\$73.2 million per year, with clearing costs of approx. US\$70 per ton; an additional US\$1.6 million. Thus, total annual import and clearing costs for psyllium are estimated at approximately US\$74.8 million, resulting in estimated net savings of US\$243 million in wheat flour import spending.

The growing use and demand for locally grown crops such as sorghum and pulses does more than enhance nutrition or reduce import dependence; it serves as a catalyst for stronger and more inclusive rural economies. With increasing demand, smallholder farmers benefit from more stable prices and better markets. This in turn stimulates production and encourages farmers to adopt improved varieties, invest in good agricultural practices, and increase areas of production.

Key policy recommendations

With refined policies and targeted investments, Sudanese policymakers can rebuild a more self-sufficient, nutritious, and resilient food system, while potentially achieving net savings of approximately US\$243 million in wheat flour import costs.

1. Support pilot implementation and scaling pathways: Establish a targeted program to operationalize composite flour pilots and chart a pathway for scaling. Facilitate public-private partnerships to accelerate adoption.
2. Invest in local value chains: Prioritise public and donor-funded investments that promote production and processing of climate-resilient crops such as sorghum and pulses.
3. Promote consumption of locally sourced foods: Launch national campaigns and institutional procurement strategies, including school feeding programs and humanitarian food assistance to increase uptake of nutritious local crops. Introduce complementary consumer-facing initiatives that highlight nutritional benefits and affordability to drive behavioural change in urban and rural markets.

4. Maintain an economic level playing field: Reduce policy distortions that favour imported wheat. Adjust tariff structures to reflect true economic costs, and reinvest revenues in domestic production and processing. Consider tax exemptions for psyllium imports to support the transition to local composite flours.

Full report open access

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