GLOBAL FARMER NETWORK – AFRICA

Feeding the Continent: Maize Production Across Africa

Nigeria · South Africa · Kenya · Rwanda · Morocco · Maize Series 2026

Maize is Africa's heartbeat feeding more than 300 million people, covering 24% of the continent's farmland, and underpinning the livelihoods of millions of smallholder families. Yet average yields hover at just 1.5–2 t/ha, a fraction of attainable potential, while post-harvest losses erase a further 15–30% of every harvest. The Global Farmer Network Africa gathered farmer voices across five countries to understand the dynamics shaping this vital crop.

300M+	~2 t/ha	15–30%	5 countries
People fed by African maize	Average continental yield	Post-harvest losses	Voices in this report

NIGERIA

Patience Koku & Stella Thomas · Smallholder advocates and farming entrepreneurs

Nigeria is West Africa's largest maize producer, with annual output exceeding 12 million metric tons. Yet yields have stagnated at 1.7–1.8 t/ha since 2017, against domestic demand of 12–15 million metric tons a structural deficit compounded by 20–30% post-harvest losses. Hybrid seed adoption sits at just 10%; the IITA estimates that raising this above 50% could double nationally yields without expanding cultivated area.

> ***"Every season, you are calculating what you can afford to lose. You invest, then watch the weather, watch the pests, and hope the market holds."***
>
> — Patience Koku, farmer and smallholder advocate

When drought drove up domestic prices, industrial millers lobbied to permit maize imports at $100/ton well below Nigeria's production cost while end-product prices remained unchanged. Farmers bore all the risk; consumers saw no benefit. Unlike Zimbabwe's Grain Marketing Board, Nigeria has no formal price stabilization mechanism. The priorities are clear: a production-cost-anchored pricing framework, scaled biotechnology adoption including Fall Armyworm-resistant Bt varieties, and sustained post-harvest investment.

SOUTH AFRICA

Motlatsi Musi · Commercial farmer, 50+ years' experience, Gauteng Province

South Africa is not merely food-secure it is a continental supplier. This achievement rests on a sophisticated seed sector, advanced agronomic practice, and a regulatory environment open to science-based solutions. Multiple cultivar options, from conventional varieties to Bt hybrids and herbicide-tolerant lines, allow farmers to manage climate risk. Specialized 'turbo' cultivars extend the planting window into January, enabling staggered production even in erratic rainfall years.

> ***"My first encounter with armyworm was in 2015–16. Fortunately, by that time, we had access to BT gene technology crops. The technology worked perfectly no damage at all."***
> — Motlatsi Musi, commercial farmer, Gauteng Province

When the Fall Armyworm arrived, Bt technology delivered complete protection. In Limpopo during 2017–18, destruction was severe enough to prompt government intervention the Department of Agriculture introduced affordable pest-resistant seed packets through cooperatives, ensuring biotechnology reached smallholders. South Africa's lesson is clear: biotechnology access is not a commercial luxury. It is a food security tool.

KENYA

David Kosgel · Agricultural practitioner and food security advocate

Maize is Kenya's most important food crop, grown across all 47 counties by millions of smallholders on one-to-five-acre plots. Climate stress defines the current challenge: 23 of 47 counties recently faced severe drought, placing approximately 3 million Kenyans at hunger risk. Paradoxically, the return of rains brought flooding and soil erosion — it is the volatility between extremes, not any single event, that makes planning almost impossible.

> ***"Until we address the structural and environmental vulnerabilities facing our smallholder farmers, millions of Kenyans will remain food insecure."***
> — David Kosgel, agricultural practitioner, Kenya

Biological pressures compound climate risk. The Fall Armyworm causes losses up to 50% in untreated fields; Maize Lethal Necrosis can cause complete crop failure. A structural shift further narrows supply: in western counties, farmers are increasingly switching to sugarcane, raising urgent policy questions about balancing farm income with national food security. The 2023/24 government fertilizer subsidy program demonstrated what targeted support can achieve a preview of the policy direction needed at scale.

RWANDA

Pacific · Smallholder farmer, Eastern Province

Rwanda's maize sector has shown remarkable momentum Season A 2024 output reached 507,985 metric tons, a 30% increase year-on-year. Yet average yields remain around 2 t/ha, and post-harvest losses of approximately 15% further reduce effective supply. The Fall Armyworm is currently the country's most significant productivity constraint, compounded by increasingly unpredictable rainfall across non-irrigated production zones.

In 2025, Rwanda took a decisive step: the Rwanda Environment Management Authority granted an environmental release permit for TELA Maize Fall Armyworm-resistant, drought-tolerant varieties developed with the African Agricultural Technology Foundation and Bayer. Rwanda's regulatory pathway is now being watched across the continent, including in Nigeria, as a model for science-based, climate-resilient crop production.

MOROCCO

Amine · Blueberry and avocado grower, North Africa

Amine does not grow maize but his experience illuminates the convergence of climate and market pressure reshaping African agriculture across all crops. A single recent rainfall event cost his operation 13–15% of production. More telling: the same rains that damaged his harvest were welcomed by neighboring cereal farmers. Climate risk is crop-specific, local, and deeply unequal.

> ***"Our clients ask us each time how much water we are using in production and to control the use of whatever we are using, sensors."***
> — Amine, blueberry and avocado grower, Morocco

EU buyers now require documented water-use data as a condition of market access a dynamic that previews where regulatory requirements are heading for African value chains broadly. Sensor technology has become a non-negotiable investment. For maize farmers increasingly connected to formal markets, the Morocco experience signals that environmental accountability will follow commercial opportunity.

Cross-Cutting Themes

The Fall Armyworm: A Continental Emergency

The Fall Armyworm appears in every country conversation in this series. Since arriving in sub-Saharan Africa around 2016, it has cost African economies an estimated $4.6–6.2 billion annually. The contrast is stark: South Africa's Bt maize provided complete protection; Nigeria, with less than 10% hybrid seed adoption, has seen yield losses exceeding 50% in affected areas. Rwanda's TELA Maize permit represents a potential turning point but technology must reach farmers at field level, not only in regulatory approvals.

Climate Change as the New Normal

Every farmer in this series has felt the climate shift in their own fields. Crucially, the solutions are not uniform. Climate adaptation looks different for a Moroccan export grower managing EU sustainability requirements than for a Kenyan smallholder navigating drought and flood in the same season. Policy responses must be calibrated to local realities while operating within coherent regional frameworks.

Technology and Policy Must Move Together

South Africa demonstrates what is possible when farmers have access to advanced seed technology and well-functioning knowledge networks. But Stella Thomas's observation in Nigeria carries equal weight: improved seed without market protection, post-harvest infrastructure, and farmer representation in policy will not transform the sector.

The Farmer Voice in Policy

Across these conversations, a consistent frustration surfaces: farmers are the primary actors in food production but are systematically excluded from decisions that most affect them. Import policy is set without consulting farmers. Biotechnology regulation moves at institutional pace rather than field-level urgency. The GFN–Africa exists precisely to address this gap.

What the Continent Requires

Maize will continue to feed Africa. The question is whether that future will be built on farmer agency, technological access, and coherent policy or whether it will remain a story of suppressed potential. The priorities are consistent, evidence-based, and achievable:

- Accelerate biotechnology adoption — Fall Armyworm-resistant and drought-tolerant varieties using Rwanda's TELA Maize regulatory pathway as a continental model
- Establish fair pricing frameworks anchored to production costs, insulating smallholders from politically-driven import decisions
- Invest in post-harvest infrastructure to recover the 15–30% of every harvest currently lost before reaching consumers
- Strengthen extension services and farmer knowledge networks, building on South Africa's collaborative model
- Expand irrigation infrastructure to reduce rain-fed dependency in drought-prone regions
- Bring farmers into policy processes as primary stakeholders not beneficiaries, but central voices

Africa's maize challenge is solvable. The knowledge exists. The technology is advancing. The farmers are willing. What is required now is the political will to build a system worthy of the people who feed the continent.

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Connecting farmer voices to regional and global policy dialogues