

MALAWI

Agrifood System Change and PARI Research on Innovations

INTRODUCTION

Government expenditure on agriculture has, on average, been relatively high in Malawi since 2004 with actual budget allocation ranging from 7% to 28% of the total annual national budget. Peak spending years on agriculture, which to a larger extent are a function of political circumstances (i.e., elections, see shaded periods in Figure 1), have been driven by the smallholder farm input subsidy program. The effectiveness of this subsidy programme has faced ongoing criticism following Malawi's low, despite stable, agriculture value added growth rate hovering around 2.5% (see Figure 1). It is against this backdrop, among others, that Malawi developed various innovative pathways to sustainable food systems transformation ranging from technological advancements, institutional frameworks to policy reforms (see Table 1). It is important to revisit these and other current innovative initiatives to draw

lessons, as provided in this brief based on studies done under PARI, to guide future strategies.

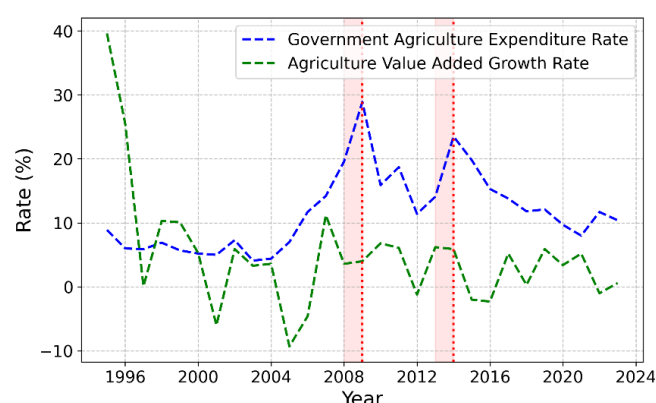


Figure 1: Trend of government agriculture expenditure and value added growth rate in Malawi¹.

Table 1. Summary of innovative pathways to sustainable food systems transformation for Malawi²

Category	Key Innovations	Implementation objectives/Strategies
Institution and policy frameworks	<ul style="list-style-type: none"> Multi-sectoral coordination approach 	<ul style="list-style-type: none"> Enhance coherence and avoid duplication of efforts among public, private and development actors.
	<ul style="list-style-type: none"> Implement land reform program for equitable access and secure land ownership 	<ul style="list-style-type: none"> Advance equitable livelihoods
	<ul style="list-style-type: none"> Develop and implement disaster risk management policy for food systems resilience. 	<ul style="list-style-type: none"> Enhance resilience to vulnerabilities, shocks, and stresses
	<ul style="list-style-type: none"> Remove taxes or introduce subsidies on small-scale irrigation equipment 	<ul style="list-style-type: none"> Promote climate resilience to improve productivity.
Technological innovations	<ul style="list-style-type: none"> Promote farmer mechanisation to replace hand hoes 	<ul style="list-style-type: none"> Scale up medium-to-large scale farm mechanisation to improve productivity

¹ Source: Authors' illustration using data from <https://www.resakss.org/node/3>, accessed on 26 May 2025

² Source: Authors' compilation from https://www.unfoodsystemshub.org/docs/unfoodsystemslibraries/national-pathways/malawi/2021-09-15-en-national-pathway-report-malawi.pdf?sfvrsn=4855c44e_1, accessed on 11 March 2025



	▪ Develop early warning systems	▪ Enhance resilience to climate risks
	▪ Structured markets and cold chain infrastructure	▪ Reduce post-harvest losses and improve food quality and safety
	▪ Promote bio-fortified and fortified agricultural products at household and commercial level	▪ Improve consumption of nutrient dense foods
	▪ Scale up natural resource management practices	▪ Enhance nature-positive production
	▪ Digitilisation	▪ Enhance access to finance and agribusiness skills
	▪ Introduce climate insurance, carbon credits and develop water harvesting infrastructure	▪ Enhance climate resilience

PARI CONTRIBUTIONS

The PARI research in Malawi relates to priorities as indicated by PARI Partners, and took note of initiatives of the Green Innovation Centers.

Innovations in value chains

Restoring soil fertility and adopting soil-related innovations are critical for improving agricultural productivity in Malawi. Other key innovations include the use of improved seeds, fertilizers and conservation agriculture practices (DARS et al., 2017). Land degradation, particularly increasing soil acidity, is reducing potassium and phosphorus levels, further diminishing fertility and productivity. Conservation agriculture, which promotes minimal soil disturbance, permanent soil cover and crop diversification, can help restore soil organic matter. Intercropping, such as combining cassava with cowpeas, pigeon peas, or crotalaria, reduces pests and maintains nitrogen levels, while crop rotation improves soil quality. Practices like maize-soybean rotations with *faidherbia albida* trees and using legumes or plant waste as ground cover have yielded positive results. Small tractors can also be used to incorporate organic matter into the soil. To encourage adoption, policies should incentivize conservation agriculture and intercropping while prioritizing improved seeds and proper fertilizer use. Training farmers on fertilizer application can optimize its benefits. In the maize value chain, improved seeds and fertilizers can significantly boost productivity, contributing to country's economic growth and reducing rural poverty (Mathenge et al., 2019).

Farmer innovations

Farmers in Malawi are a valuable source of locally adapted innovations. Support is needed to validate these innovations, assist with commercialization and

empower women innovators (Tambo, 2018). A review of submissions to a farmer innovation contest organized by PARI revealed that over half of farmers developed original innovations, while the rest adapted technologies to local conditions. Most innovations aimed to increase agricultural production and reduce costs, with technical innovations dominating in livestock production, crop management and storage. These innovations were cost-effective, relying on locally available materials costing USD 20 or less. Although two thirds of innovators knew others who had adopted their ideas, further support is required to validate and commercialize promising innovations. Women were underrepresented, contributing just a quarter of submissions. Efforts are needed to encourage women to innovate and highlight their contributions.

Employment

Engaging young people in Malawi's national job creation programs has the potential to significantly reduce unemployment, particularly in rural areas. Challenges such as limited coordination, training and funding must be addressed to fully realize this potential (Gondwe et al., 2020). A large proportion of Malawian youth work in low-quality, informal jobs due to limited opportunities. Over the past 15 years, public and private initiatives have sought to involve young people in agricultural value chains to boost employment. However, these programs primarily focus on rain-fed agriculture and conservation farming. These programs create temporary jobs and leave many



youth unemployed during off-seasons. Most programs emphasize crop cultivation training and inputs but overlook other critical skills. Key barriers to success include poor coordination among agencies, insufficient funding and weak monitoring mechanisms. To attract youth to agriculture and create sustainable opportunities, it is essential to address these issues. Efforts should focus on improving access to land,

introducing innovations and technologies in crop production, strengthening extension services and upgrading infrastructure such as electricity and roads.

KEY TAKE AWAYS FROM PARI RESEARCH IN MALAWI

Boosting soil fertility: Restoring soil fertility in Malawi through conservation agriculture, intercropping and improved seeds and fertilizers is key to enhancing productivity and alleviate rural poverty.

Farmer innovations: Malawi's farmers create cost-effective, locally adapted solutions, particularly in crop and livestock production. Greater support is needed for validation, commercialization and encouraging women's participation.

Youth in agriculture: To increase the attractiveness of agricultural professions for Malawi's youth, efforts should prioritize land access, crop innovations, stronger extension services and improved infrastructure like roads and electricity.

REFERENCES

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All studies are available at www.r4ai.org.

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