

## Do agricultural input subsidies on staples reduce dietary diversity?

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*Photo above: Maize growing in Lilongwe District*

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### Project Objectives

The study examined the influence of Malawi's agricultural input subsidy (AIS) programme on food choices, and in particular, the effects of the AIS programme on dietary diversity in Malawi. The study also explored the wider context of food preferences and trade-offs with respect to agricultural factors, market participation and seasonality.

## Background & Significance

Investment in agriculture input subsidy (AIS) programmes has potential to raise agricultural productivity and improve diets. Many low- and middle-income countries, particularly those in Africa, have expressed interest in such programmes or are implementing them. However, little is known of the wider context of AIS programme implementation and the effect of these programmes on food choices, as well as household and gender dynamics. In Malawi, the Farm Input Subsidy Programme (FISP), implemented between 2005 and 2020 and recently replaced by the Affordable Inputs Programme (AIP), primarily subsidised maize and legumes by increasing farmers' access to key agricultural inputs. At times it directly benefitted ~80% of Malawi's farm households, but while it continued to be a major intervention in smallholder agriculture, the number of beneficiaries later declined to about 900,000 households. While FISP and similar programmes across Africa are hypothesized to improve food security and support smallholder livelihoods, there is considerable contention about the programme impacts, as they tend to target energy-dense but nutrient-poor staple crops. This could have negative consequences for desired outcomes, including diet quality. This research provided nutrition and agriculture policymakers a more nuanced and contextual understanding of AIS programme impact on food choices and consumption to support development of nutrition-sensitive policies.

## Methods

This study took place in rural areas of Lilongwe and Phalombe Districts in central and south Malawi. Qualitative data included 24 semi-structured interviews with policymakers and other stakeholders, as well as 16 focus group discussions with people in the village communities, including FISP beneficiaries. These data enabled the study team to explore stakeholder perceptions of FISP impact on dietary diversity, and the context for this, including any perceived barriers in FISP implementation. Quantitative data included household surveys with 400 households (some of which were FISP beneficiaries) on topics related to household agricultural activities, food- and non-food expenditures, foods obtained from non-purchased sources, food security. Dietary assessment was also undertaken. Quantitative data collection also included market surveys of food prices and a discrete choice experiment with a subset of the surveyed households. These data enabled the study team to infer FISP impact on changes in food price and on consumption patterns in the context of food preferences, trade-offs, and hypothetical consumption responses to different price scenarios for maize and other foods.



*Photo to the right: Focus group of men in a village of Phalombe District*

## Results

This study found that while there was no significant impact of FISP on food choices or dietary diversity, there was a relationship between market engagement and dietary diversity. Although this lack of impact of the FISP on food choice and dietary diversity should be considered in the context of other research including a review by ourselves (Walls et al., 2018)<sup>1</sup> showing some small minimal impact of the FISP on nutritional outcomes. However, our study found that even if the FISP were resulting in lower maize prices, food insecurity and demand for energy-dense foods led people to purchase more maize and less of other foods. Potential explanations for this include FISP policy design, FISP policy implementation, and characteristics of the target population. Some stakeholders were concerned with the efficiency of the current programme since beneficiaries are impoverished farmers with limited agricultural production capacity. They advocated for FISP to target productive farmers and the implementation of a different system to address poverty. Stakeholders identified implementation challenges including delays and low policy coordination. On-the-ground decision-making amongst the people targeted by the policy resulted in the sharing and selling-on of coupons, potentially diluting programme effect. The study was conducted in a context of subsistence farming marked by extreme poverty, seasonality and food insecurity. In a context where maize consumers are also frequently maize producers, a decline in the price of maize is a disincentive to sell, leading to less revenue and less dietary diversity. Maize is considerably cheaper than other foods and selling it provides minimal opportunities for market engagement, a known factor in improved dietary diversity. However, maize's role in addressing food insecurity incentivizes its production over legumes, particularly for farmers with small land plots.



*Photo above: Cooking of maize in a village of Lilongwe District*

*Photo below: Maize growing in a village of Lilongwe District*



1. Walls H, Johnston D, Tak M, Dixon J, Hanefeld J, Hull E, Smith RD. The impact of agricultural input subsidies on food and nutrition security: a systematic review. *Food Security*. 2019;10(6):1425-1436.

## Key Takeaways

- The Malawi Farm Input Subsidy Programme (FISP), an agricultural input subsidy (AIS) programme which provided inputs to farmers to support the production of maize and legumes, did not significantly impact food choice or dietary diversity, nor did it significantly improve the livelihoods of poor farmers with limited production capacity. However this finding should be considered in the context of studies previously showing some minimal positive impact.
- Food-insecure populations tend to gravitate toward maize-based products for production and consumption due to the relative affordability and accessibility of those items, which has negative implications for dietary diversity among the poor.
- Engagement with food markets is associated with increased dietary diversity but growing and selling maize does little to increase the income of poor farmers, thereby limiting their ability to engage with markets.
- The poverty and food insecurity experienced by these populations, combined with small plot sizes, results in prioritization of maize production over other crops.
- While policy reform addressing shortcomings with the FISP implementation would be partially beneficial, something that now relates to the AIP, this study suggests that policy would be more nutrition-sensitive if it focused on increasing income and reducing impacts of seasonality.
- Some stakeholders advocated for the programme to target productive farmers – and suggested that a different system is needed to address poverty.

## Project Outputs

### Academic Publications

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- Matita M, Chirwa EW, Johnston D, Mazalale J, Smith R, Walls H. Does household participation in food markets increase dietary diversity? Evidence from rural Malawi. *Global Food Security*. 2021;28. <https://www.sciencedirect.com/science/article/pii/S2211912420301395>
- Matita M, Johnston D, Walls H. Understanding the drivers of food choice to improve population nutrition: An application of economics to public health. *Malawi Journal of Economics* (in press). 2021.
- Walls H, Johnston D, Matita M, Kamwanja T, Smith R, Nanama S. Agricultural input subsidy programmes and population nutrition: a qualitative assessment in Malawi with implications for improvement to policy implementation theory. Under review. 2021.
- Walls H, Johnston D, Matita M, Chirwa E, Mazalale J, Quaife M, Kamwanja T, Smith RD. How effectively might agricultural input subsidies improve nutrition? A case study of Malawi's Farm Input Subsidy Programme (FISP). Under review. 2021.

*\*\* We are also analysing additional data from the study, with further publications expected. Please contact the study investigators for further information.*

## Project Outputs

### Recorded Presentations

- "Does Malawi's Farm Input Subsidy Programme (FISP) improve dietary diversity?" By Walls H, Johnston D, Chirwa E, Matita M, Mazalale J, Quaife M, Kamwanja T, Smith R. 4th Agriculture, Nutrition & Health (ANH) Academy Week, June 24 – June 28, 2019. [https://www.youtube.com/watch?v=\\_4gMncBhqMA](https://www.youtube.com/watch?v=_4gMncBhqMA)
- "Has the provision of legume seed subsidies affected dietary diversity?" By Matita M. 4th Agriculture, Nutrition & Health (ANH) Academy Week, June 24 – June 28, 2019. <https://www.youtube.com/watch?v=yIHjua-VkYg>
- "Agricultural input subsidy programmes and dietary diversity: a qualitative assessment in Malawi with implications for policy implementation theory." By Walls H, Johnston D, Matita M, Kamwanja T, Smith R, Nanama S. 5th Agriculture, Nutrition & Health (ANH) Academy Week, June 30 – July 2, 2020. <https://www.youtube.com/watch?v=5phAsNHZUjs&feature=youtu.be>
- "Household participation in food markets and dietary diversity: Evidence from rural Malawi" By Matita M and Walls H. DFC program / IMMANA webinar series, Webinar #1 of Drivers of food choice in low and middle-income countries: a synthesis of evidence. <https://www.youtube.com/watch?v=MGwKHHm3yRI&feature=youtu.be>

### Blogs from Study Investigators and Field Staff

- "Observations from the field: Agri-nutrition research in Malawi". By Walls H. Drivers of Food Choice. 2017. <https://driversoffoodchoice.org/2017/11/03/agri-nutrition-research-in-malawi-observations-from-the-field/>
- "Collecting data on agricultural policy, food choice and dietary diversity in rural Malawi". By Masala G, Masanche B, Mazalale M. . Drivers of Food Choice. 2018. <https://driversoffoodchoice.org/2018/03/01/collecting-data-on-agricultural-policy-food-choice-and-dietary-diversity-in-rural-malawi/>
- "I haven't eaten in three days': Understanding personal experience of food insecurity in rural Malawi." By Chawantha S. . Drivers of Food Choice. 2018. <https://driversoffoodchoice.org/2018/05/14/i-haven-t-eaten-in-three-days-understanding-personal-experience-of-food-insecurity-in-rural-malawi/>

### Other Output Material

- Project page on DFC website - <https://driversoffoodchoice.org/research/project-descriptions/agricultural-input-subsidies/>
- Walls H, Johnston D, Mazalale J, Chirwa E. "Why we are still failing to measure the nutrition transition." BMJ Global Health. 2018; 3:e000657. - <https://gh.bmj.com/content/3/1/e000657>
- Walls H, Baker P, Chirwa E, Hawkins B. Food security, food safety and healthy nutrition: Are they compatible? Global Food Security. 2019;21:69-71. <https://researchonline.lshtm.ac.uk/id/eprint/4656815/>

This research has been funded by the Drivers of Food Choice (DFC) Competitive Grants Program, which is funded by the UK Government's Foreign, Commonwealth & Development Office and the Bill & Melinda Gates Foundation, and managed by the University of South Carolina, Arnold School of Public Health, USA.; however, the views expressed do not necessarily reflect the UK Government's official policies.