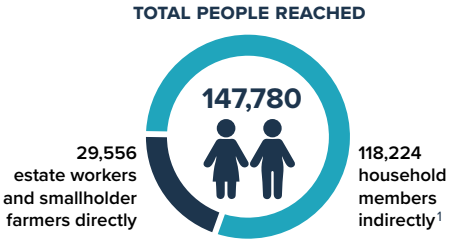
# HEALTHY DIETS FOR TEA COMMUNITIES

## MALAWI PROGRAMME RESULTS

gain
Global Alliance for Improved Nutrition

etp

# PROGRAMME SUCCESSES IN MALAWI




The programme was successful in implementing models that reached tea workers at scale.

**23,000**

Estate workers are consuming fortified maize lunches, providing critical micronutrients on a regular and sustainable basis.


**Smallholder farmers.** Increased the percentage of women eating a diverse diet - meeting the minimum dietary diversity (at least 5 out of 10 food groups) - over the course of the programme.

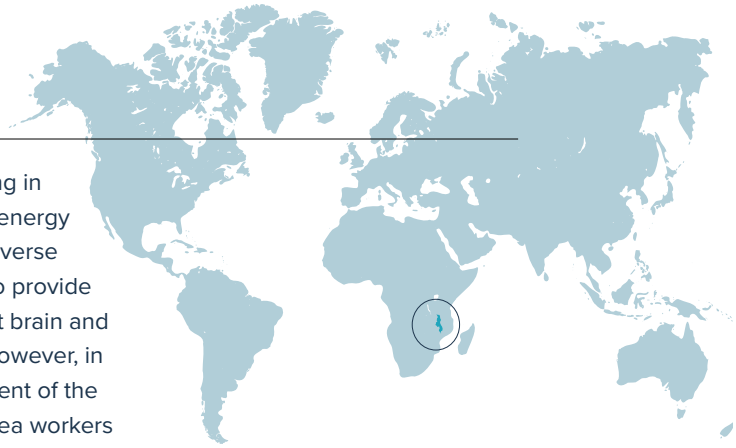
By the end of the programme, **72** per cent of smallholder farmers agreed that biofortified crops improve the nutritional quality of diets, compared to 36 per cent at baseline.

Smallholder farmers increased their consumption of micronutrient-rich orange and green leafy vegetables by 11 per cent (from 71 per cent to 82 per cent).

Increased awareness and consumption of biofortified foods, particularly vitamin-A biofortified orange fleshed sweet potato, which boosts the immune system and prevents vision loss. 100 per cent of smallholder farmers had heard of fortified foods by the end of the programme, compared to 74 per cent at baseline.

Built **5,151** 'tip taps' for community members to wash their hands more hygienically; influenced positive handwashing changes among smallholder farmers.

**Interventions will have a sustained impact** beyond the life of the programme: through tea estates continuing to provide fortified lunches to workers daily; through the long-term engagement of government health and agriculture workers; and through the provision of reusable sweet potato vines to programme participants.

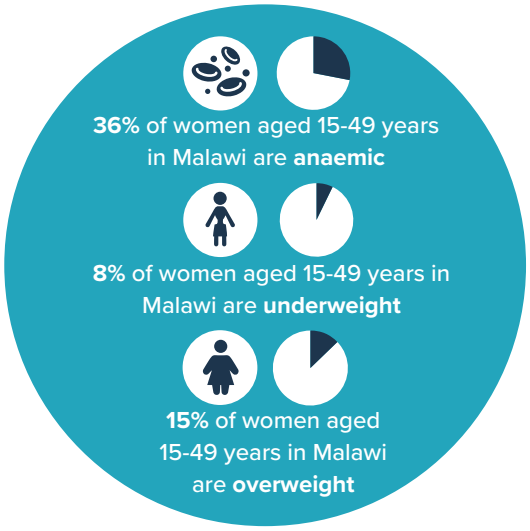


## BACKGROUND

Poor diets are the leading cause of global ill health, resulting in malnutrition and deficiencies such as anaemia, decreased energy levels, diminished health, and decreased productivity.[2] A diverse diet containing a wide variety of food types is more likely to provide the vitamins and minerals needed for good health, to boost brain and body development, and bolster resistance to infections.[3] However, in 2021, more than 3.1 billion people in the world - or 42 per cent of the global population – were unable to afford a healthy diet.[4] Tea workers and farmers, predominantly women, often contend with high rates of malnutrition due to diets lacking essential nutrients. Healthy Diets for Tea Communities is a public-private collaboration between the Global Alliance for Improved Nutrition (GAIN), the Ethical Tea Partnership (ETP), and eight leading tea companies[5] which aims to promote healthy diets in tea supply chains in India, Malawi, and Kenya. This document summarises programme results in Malawi between 2020 and 2023.

## MALNUTRITION IN TEA COMMUNITIES IN MALAWI

Global tea production totals over USD 17 billion annually, and the sector continues to grow. In many countries, the tea sector contributes significantly to income and employment for millions of rural families, with smallholder farmers producing 60 per cent of world production.[6] However, tea workers and farmers often suffer from high malnutrition rates because their diets, which consist largely of staple foods such as rice, bread, maize, and wheat, often lack foods rich in essential nutrients and vitamins needed for good health. Nutritious foods are often less affordable and available to these populations, and they may be less aware of the importance of healthy diets. Malnutrition in Malawi is a significant challenge: 8 per cent of women are underweight.[7] In tea-producing regions, 36 per cent of women in tea-producing regions are anaemic, and 15 per cent of women are overweight.[8]




## THE HEALTHY DIETS FOR TEA COMMUNITIES PROGRAMME

In Malawi, GAIN, and the Ethical Tea Partnership worked in close cooperation with the Tea Association of Malawi to improve the availability of - and demand for - nutritious foods. The programme targeted: (i) tea estate workers, who are employed to produce and pick tea; and (ii) smallholder farmers, who sell their freshly-plucked green leaf tea to plantations or tea factories to be processed into black tea. The optimal channels to reach these two populations are different, so the programme tailored its approach accordingly.

### Estate workers

- **Provide fortified lunches with essential vitamins and minerals** at work for tea estate workers.
- **Fortified maize flour** available to workers on 12 estates through a dossifier (a device which adds a precise amount of critical micronutrients to flour), reaching up to 23,000 people, depending on season.
- **Awareness campaigns** on tea estates on balanced diets.

### Smallholder farmers

> **Reach 6,556 farmers with nutrition clubs to train farmers on good nutrition and sanitation:**

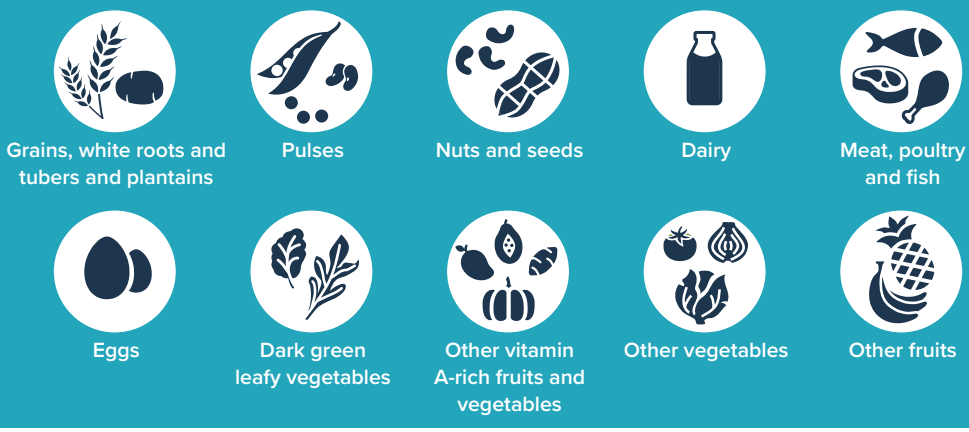
- Establishing kitchen gardens (small local gardens) and growing nutritious products in them.
- Techniques such as: planting bio-fortified crops; managing fruit trees; managing pests; and multiplying vegetable seeds.
- Handwashing, hygiene and providing materials for the community to build 5,151 'tip taps' for handwashing.

> **Community events** - cooking demonstrations and competitions.

> **Awareness campaigns** on diverse diets and hygiene.

## SCORING DIETS: MINIMUM DIETARY DIVERSITY, AND WHY IT MATTERS

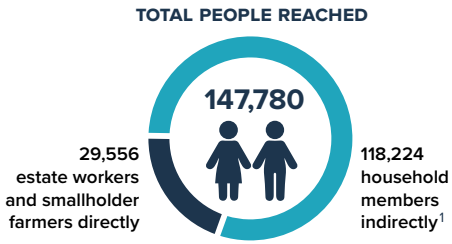
A diet that includes a wide range of different foods and food groups is best for ensuring the right balance of protein, essential fatty acids, vitamins, and minerals (also known as micronutrients) for good health. Dietary diversity refers to a diet that contains a higher concentration of micronutrients. Women who consume a minimum of 5 out of 10 possible food groups are considered to have achieved the minimum adequate diet diversity. To assess this, women are surveyed about their food intake over the past 24 hours and assigned a score. A score exceeding 5 suggests that they are more likely to meet the minimum required level of micronutrients; the higher the score, the more micronutrients likely consumed. Although the minimum dietary diversity indicator is obtained by surveying individual women, it provides valuable insights into the nutritional status of a population. A key programme objective was to increase the minimum dietary diversity scores for programme participants.




# PROGRAMME RESULTS

### The programme reached 147, 780 people in total:

23,000 estate workers and 6,556 smallholder farmers. 118,224 family and community members.[1]



© Shutterstock

## INCREASING CONSUMPTION OF BIOFORTIFIED FOODS

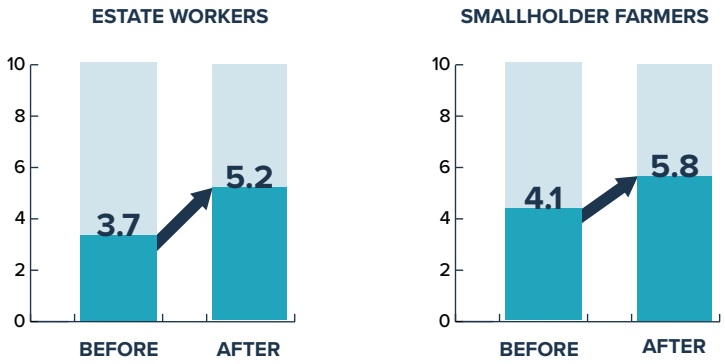
Biofortified orange-fleshed sweet potato is a highly effective tool for tackling vitamin A deficiency, which can cause vision loss and skin, heart, lungs, tissue, and immune system issues. They are particularly popular because they are well-suited to the climate of the programme area, the vines they grow on can be re-used (avoiding the need to buy seeds), and they provide high yields, allowing families to sell excess produce. By the end of the programme, 72 per cent of smallholder farmers agreed that biofortified crops improved the nutritional quality of food compared to 36 per cent at baseline. 86 per cent of smallholder farmers who participated in the programme reported growing orange fleshed sweet potatoes in their home gardens – an increase of 20 per cent from the start of the programme.

**Women are eating more diverse, nutritious foods.** The percentage of smallholder farmer women eating at least 5 of the 10 key food groups - meeting the minimum dietary diversity - increased from 36 per cent to 71 per cent over the course of the programme. This means that these women are eating more micronutrient-rich diets.


**Smallholder farmers**. Increased the percentage of women eating a diverse diet - meeting the minimum dietary diversity (at least 5 out of 10 food groups) - over the course of the programme.

Although not an outcome expected from the project design, female estate workers also reported more diverse diets by the end of project.

**Average dietary diversity score* before and after Malawi programme**




* Number of food groups women consumed in 24 hours before and after programme

**Awareness of fortified foods**: by the end of the project, 100 per cent of smallholder farmers had heard of fortified foods, compared to 74 per cent at the start.

**Handwashing and hygiene improvements.** Smallholder farmers were trained on the benefits of good hygiene and washing hands correctly at key moments in the day, for example before preparing food and after using the toilet. They were particularly encouraged to wash their hands immediately after visiting a toilet using a tip-tap hand washing facility. The evaluation found that 25 per cent more smallholder farmers and estate workers were washing their hands before preparing food. Alongside the programme, COVID played an important role in influencing behaviour: nearly 90 per cent of those asked said that their handwashing practices had changed due to COVID.

A girl using a tip tap. © Shutterstock

## TIP TAPS FOR BETTER HYGIENE

Tip taps are simple yet effective handwashing devices that use a stick designed like a foot pedal to tip water from a container into the hands, thus allowing users to wash their hands without touching the container. 80 per cent of smallholder farmers attended training in the construction of tip-taps and handwashing. The programme provided attendees with start-up construction materials of tip-taps and soap for hand washing. 5,151 tip taps were built because of the programme.

## INCREASED FORTIFIED MAIZE CONSUMPTION

Food fortification is a proven and cost-effective way to add vitamins and minerals to staple foods. In Malawi, only 15 per cent of maize flour is fortified.[9] The government of Malawi has made fortification of maize flour mandatory for commercial millers, but members of the Tea Association of Malawi have voluntarily adopted this mandatory fortification standard for all their estate meals. As part of the programme, 12 estates installed dossifiers - machines which add a precise amount of premix containing critical micronutrients into maize flour, providing iron, folate, vitamin A, B-1, B-2, B-12, niacin, and zinc. Depending on the season, this intervention benefits up to 23,000 workers daily, meaning tea workers will benefit from fortified lunches well beyond the life of the programme.

# SUSTAINABLE IMPACT

- **Tea estates continue to supply fortified daily lunches to their workers,** ensuring that these workers receive essential micronutrients on a sustainable basis, extending the programme's impact.

- **Engaging government is key to sustainability.** Engaging government of Malawi community health workers and agricultural extension workers to ensure that messages around healthy diets are woven into their work boosted impact, including beyond the life of the programme. Moving forward, encouraging the government to support and encourage tea estates to ensure fortification is done to standard, and bringing in quality control mechanisms, will be critical to long-term impact.

# LEARNINGS

**Workplaces are a sustainable and effective entry point to improve diet quality when lunch is being provided.** Tea estates providing dossifiers and fortified maize flour for lunches have proven to be effective and cost-efficient, ensuring that estate workers receive critical micronutrients on a daily and sustainable basis. This model can be replicated wherever large numbers of workers receive easily fortified meals. Identifying a reliable source of premix containing essential vitamins and minerals to add to the flour is key to success.

**Acceptability of fortified foods is key to success.** Tea estate workers were initially reluctant to consume lunches containing fortified maize flour because they were worried that they contained a COVID vaccination or birth control, resulting in a dip in acceptance of fortified lunches. Carrying out education activities, engaging tea estates to support the initiative, and inviting a representative from the Tea Association of Malawi to come and eat the food were key to increasing acceptance of the fortified maize flour, bringing the acceptance levels of lunches containing it back to the levels of acceptance of non-fortified lunches.

**Prioritise the most feasible and cost-effective biofortified seeds.** Orange-fleshed sweet potato cultivation is cost-effective because the vines are easily reusable in the programme area due to favourable weather conditions, making them a sustainable option. Orange maize, on the other hand, is more expensive and the seeds are not reusable. Similarly, fortified beans were unsuitable for some areas.

An estate worker in Malawi works the dossifier.
© GAIN/Mirjam Kneepkens