

Nutritious maize-OFSP porridge helps diversity diet in School Feeding Programme in Malawi



Fig 1. School food committee members at Phinda School preparing a blended maize-OFSP mash porridge (Credit: S. Mbewe)

What is the problem?

Over the past two decades, Malawi has experienced a decline in the rates of undernutrition, an indication that investments in nutrition are paying off. The percentage of children under five years of age who are stunted has decreased from 47.1 to 37.1, underweight from 12.8 to 11.7 and wasting from 4.0 to 2.7 (2010 and 2015-16 Demographic and Health Surveys). The International Potato Center (CIP) shares this success and continues to contribute to the furtherance of undernutrition and micronutrient malnutrition reduction through the integration of resilient and nutritious orange-fleshed sweetpotato (OFSP) into the farming systems.

What do we want to achieve?

The overall goal is to enhance food security and dietary diversity for all family members with more emphasis on under five children, lactating and pregnant mothers. Through the project 'Root and Tuber Crops for Agricultural Transformation in Malawi (RTC-ACTION Malawi)' which is funded by Irish Aid (2016-2021), the project has reached 50,000 beneficiary households including care groups. To expand our reach, the project in its third year piloted the integration of nutritious OFSP in school feeding programs.

At this time, free daily school meals are provided by a number of stakeholders, mainly by Government of Malawi and World Food Programme through the Home-Grown School Feeding Program and Mary's Meals. The main meal is maize based or maize-soya blend porridge. The school meals program has contributed towards improving school enrolment, promoting regular attendance, reducing dropout rates and improving childhood nutrition as well as increasing children's ability to concentrate and learn in class.

- To date, the Root and Tuber Crops (RTC)-Action project (2016-2021) has reached 50,000 beneficiary households. This year it piloted introducing orange-fleshed sweetpotato (OFSP) into eight primary school feeding programs to expand its reach.
- Distributed OFSP vines to the schools involved in the home-grown school feeding program for production of roots of four varieties namely: Anaakwanire, Kadyaubwelere, Kaphulira, Mathuthu and Royal Choice
- Conducted three recipe demonstrations in all the schools targeting the food committee and School Health and Nutrition Teachers (SHNTs)
- Held meetings in the districts where the nutrition component of the project will be introduced to the District Nutrition Coordination Committees (DNCCs) and its integration to school feeding programs



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Fig 2. Pupils at Phinda School in Chiradzulu enjoy their porridge (Credit: S. Mbewe)

The RTC-ACTION project is therefore reaching out to schools to advocate and demonstrate the inclusion of OFSP in the school meals to contribute to greater nutritious porridge diversity. The enriched 'super porridge' will not only support learning by relieving short-term hunger but also contribute to reducing micronutrient deficiencies, leading to improved health and provide markets for local growers.

Where are we working?

The activity has been piloted in eight schools and reached 7,666 pupils (Table 1). We are working in collaboration with the Ministry of Education Science and Technology through the District Education Management Offices. The Schools Health and Nutrition Coordinators (DSHNCs) are facilitating the exercise with support from School Health and Nutrition Teachers (SHNTs) and Agriculture Extension Development Officers (AEDOs) with support from the District Nutrition Coordination Committees (DNCCs).

Table 1. 2019/20 pilot schools on the integration of OFSP in school feeding program

District	Zone	School	Enrolment		
			Boys	Girls	Total
Mwanza	Chidoole	Mphingwi	443	550	993
		Chizumbi	485	555	1,040
Neno	Chikonde	Kalion JP	116	71	187
		Matandani	132	146	278
Zomba	Mayaka	Namiyala	543	570	1,113
Phalombe	Boma	Namikango	753	762	1,515
Chiradzulu	PIM	PIM	707	719	1,426
	Nkhande	Phinda	552	562	1,114
Total			3,731	3,935	7,666

How are we making it happen?

CIP with support from the school feeding committees, DSHNC, SHNT and AEDOs provided bundles of OFSP vines for root production in schools. Training on improved agronomic and storage practices was provided by CIP for sustainability. At harvest, schools' food committees were provided with enhanced nutrition knowledge and a number of Information Education and Communication (IEC) materials on dietary diversification, vitamin A and other micronutrients.

Three types of porridge were prepared for student feedback:

- Ordinary porridge (using available flour, pure maize or maize-soy blend meal)
- Mashed OFSP combined with groundnuts and milk
- OFSP with either maize meal or maize-soy blend meal (depending on availability at respective schools) in simple proportions of 1 cup OFSP puree: 2 cups water and 1 cup of flour (Fig. 1).

Formal taste tests by color, taste and texture were done in five schools involving 128 pupils. The results revealed that 42% of the children liked the ordinary porridge (A), 88% liked the OFSP-groundnut porridge and 82% liked the OFSP-maize porridge.

What have we achieved so far?

We have done meetings in the districts where the nutrition component of the project will be introduced to the DNCCs and its integration to school feeding programs (Fig. 2). Eight schools with available land in five districts expressed interest and were chosen for the piloting. Sensitization meetings were done to create awareness. The target group was the food committee comprising the SHN teachers, head teachers, Parent and Teacher Association members, School Management Committee and community members. The message delivered focused on the importance of OFSP varieties, the principal functions of Vitamin A, Vitamin A deficiency and food sources for Vitamin A. We distributed OFSP vines to the home-grown schools for

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production of roots of five varieties namely; Anaakwanire, Kadyaubwelere, Kaphulira, Mathuthu and Royal Choice. Each school received 100 bundles (100 cuttings of 30 cm long per bundle) that is enough for 2,200 square meters (sq m). With the early planting, some fields expanded to 4,000 sq m.

We have done three recipe demonstrations in all the schools targeting the food committee and SHN teachers (Fig. 3).

The food committee with support from the SHN teachers are rolling out the activity until the sweetpotato is finished in their fields. Some schools are purchasing the OFSPs from the market.

Next steps

Support other schools with quality planting materials for multiplication and facilitate easy access to planting materials to increase production. This will include provision of training on the root-based Triple 'S' Technology to ensure vine availability. While supporting the primary schools with the inclusion of OFSP in school feeding, consideration is also being made to consider Community Based Childcare Centers (CBCCs) targeting the pre-

primary school children.

We will conduct follow-ups and monitoring of the schools' activities in vine conservation and preparation of porridge for the school children.

Partners: Ministry of Agriculture, Irrigation and Water Development through Food and Nutrition unit at the District Agriculture Development Offices; Ministry of Education, Science and Technology through the Schools Health and Nutrition section at the District Education management Offices

Local communities: Other stakeholders implementing the school feeding program



Fig 3. Stanley Mbewe a CIP nutrition technician demonstrating the cooking of 'super OFSP-based porridge'. (Credit: O. Malugagwa)

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