

# MILLET, LEGUME, DAIRY AND VEGETABLE BASED PRODUCTS TO IMPROVE NUTRITIONAL STATUS OF CHILDREN IN TANZANIA AND MALAWI

*Seetha Anitha<sup>1</sup>, Yasinta Muzanila<sup>2</sup>, Agnes Mwangwela<sup>3</sup>, Justus Ochieng<sup>4</sup>, Victor Afari-Sefa, Ziona Kalumikiza<sup>3</sup>, Khumbo Mhango<sup>3</sup>, Inviolata Moshia<sup>4</sup>, Patrick Okori<sup>1</sup>, and Takuji W. Tsusaka<sup>1</sup>*

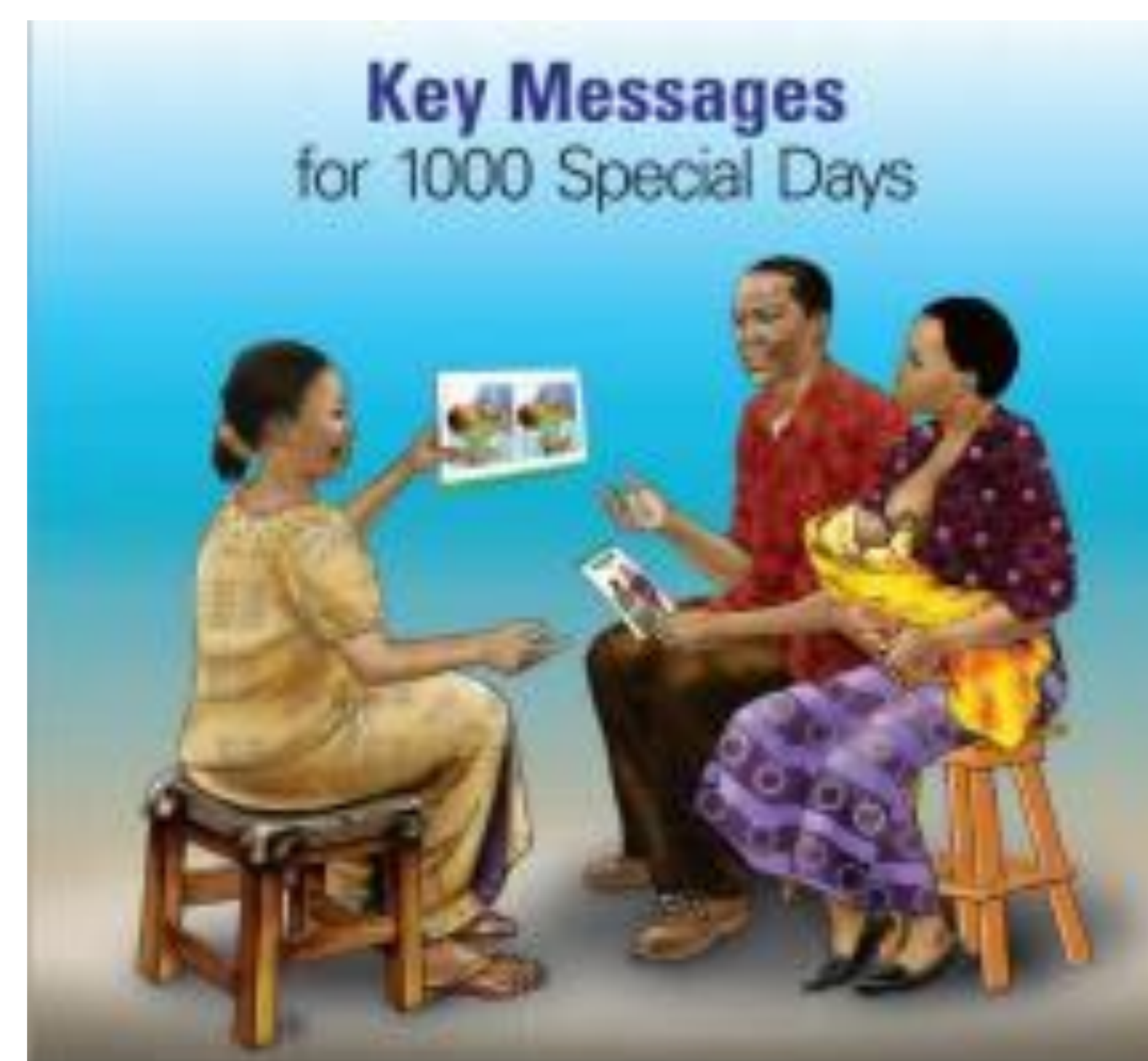
*<sup>1</sup>International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)-Lilongwe, Malawi*

*<sup>2</sup>Sokoine University of Agriculture, Morogoro, Tanzania, <sup>3</sup>Lilongwe University of Agriculture and Natural Resources, Lilongwe, Malawi, and <sup>4</sup>World Vegetable Center, Arusha, Tanzania*

*Corresponding author email: s.anitha@cgiar.org*

## TECHNOLOGY/TOOL DESCRIPTION

- Sustainable agricultural intensification has demonstrated the benefit of nutrient-rich crops in small-scale farming systems.
- Nutrient-sensitive interventions do not automatically provide the expected household nutrition outcomes. Nutrition knowledge, food processing and preparation methods are vital to maximizing the nutrient content of food.
- Gender and household socio economic dynamics also affect the nutritional outcomes.
- The impact of integrated training on nutrition, household product development (Recipes), and food safety through learning by doing process for the duration of 81 day among mothers showed improvement in nutritional status among under 5 children. Similar trainings were also conducted for Lead farmers, both men & women.



**Table 1. Impact of 21 day and 81-day intervention on growth and food safety indicators**

Child growth indicator & food safety indicators	Indicator status (21 day trial among 87 mother child pair)*			Indicator status (81 day trial among 51 mother child pair)		
	Baseline	Endline	% Change	Baseline	Endline	% Change
Underweight (%)	20	0	-100	14.1	9.8	-30.5
Stunting (%)	31	31	0	56.2	56.8	0
Wasting (%)	7	0	-100	4.7	0	-100
Diarrhea (%)	80	25	-69			
Aflatoxin exposure (%)	83	16	-81	53	0	-100

\*Similarly, milk product formation also helped to improve dietary nutrition intake.

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## SIAF-Based benefits

Benefit indicator	Impact of nutrition recipes	
	Baseline	End line
Underweight among under-five children (%)	9.5 (41)	5.1 (39)
Wasting among under-five children (%)	0 (41)	0 (39)
Human condition (Food security) as HFIAS*	48.4 (31)	53.3 (29)
Children meeting recommended dietary Protein (%)	73.7 (31)	98.2 (29)
Children meeting recommended dietary Calcium (%)	2 (31)	23.6 (29)
Children meeting recommended dietary Phosphorus (%)	44.5 (31)	90 (29)
Children meeting recommended dietary Zinc (%)	27.7 (31)	84.5 (29)
Children meeting recommended dietary Vitamin A (%)	33 (31)	92.5 (29)
Capacity: Access to information (trainees on milk product processing)	0 (31)	100 (29)
Management control by gender (decision making on income expenditure)	baseline n=31, end line n=29	
	Male 64	57
	Female 7	13
Rating of technologies by female gender (household milk product processing) %	3.2 (31)	96.7 (29)
Market participation-% Production sold (milk on daily basis)	91.9 (31)	88.9(29)



## BENEFITS FROM NUTRITION EDUCATION AND RECIPE PREPARATION TRAINING

Benefit indicator	Nutrition training category		% change
	Not participated	Participated	
Vegetable consumption per capita (g/day)	115	252	119
Vegetable consumption diversity (No. consumed per day)	3	5	60
Vegetables consumption (g/day) per capita in female headed households	205	350	71

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## EXTENT OF GENDERED CAPACITY BUILDING AND SCALING

- One hundred and thirty-eight mothers of under 5 children were trained intensively (using learning by doing) on preparing the ingredients and cooking the complimentary food and the necessary hygiene required during the cooking and handling process.
- Provided an opportunity, men were keen to participate in nutrition related training & support for child nutrition
- Women's control over legume production resources positively associated with Minimum Dietary Diversity; Minimum Meal Frequency and Minimum Acceptable Diets
- Access to and control over factors of legume production e.g. land was associated with high legume yield which affected amount of legumes for consumption.



## LESSONS LEARNED

Consumption demand is depending on production demand. It was observed that if there was the production of a particular crop then it was easy to incorporate them into the diet.

## CHALLENGES AND GAPS

All around the year availability of foods requires commercial product development and ensuring year-round availability of food materials.

## DELIVERABLES

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