

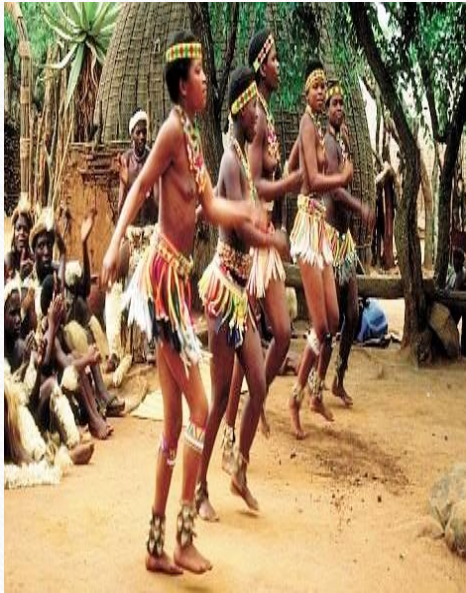


REGIONAL TRAINING WORKSHOP ON QUALITY ASSURANCE AND QUALITY CONTROL FOR FLOUR FORTIFICATION

KENYA

27th May 2016





INTRODUCTION

- Malnutrition is still a global problem, developing countries are more affected.
- Malnutrition places an individual at increased risk of morbidity and mortality and is also shown to be related to impaired mental development.
- Average food intake is 2,155kcal/person/day however more than 1/3 of the Kenyan population still consumes below 2100kcal per day



Ministry of Foreign Affairs of the Netherlands

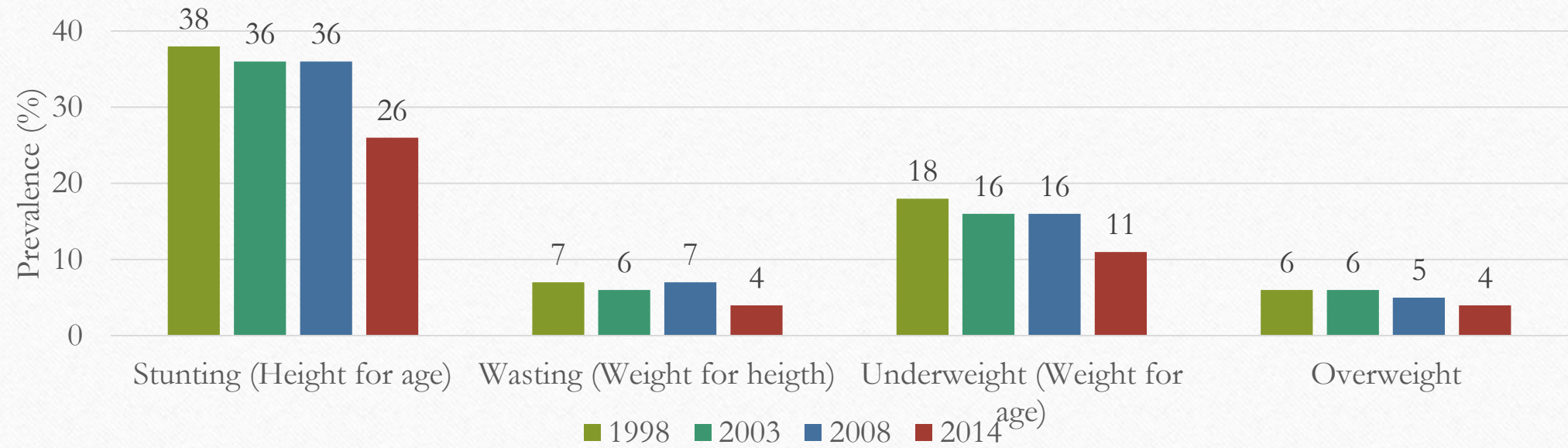


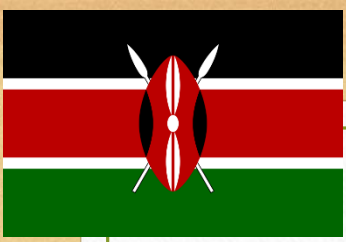
Food Fortification Initiative
Enhancing Grains For Healthier Lives



TRENDS

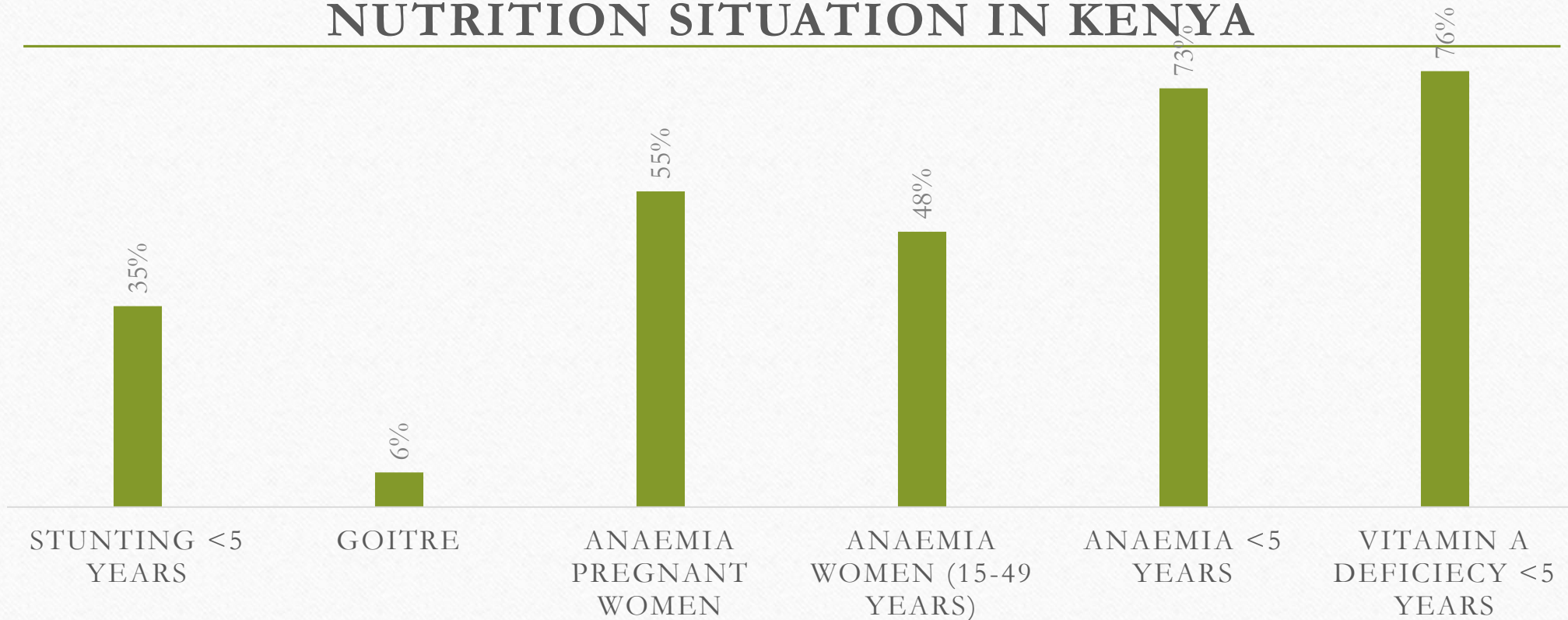
Malnutrition Trends in Kenya





NUTRITION SITUATION

NUTRITION SITUATION IN KENYA



INTERVENTION PROGRAMMES

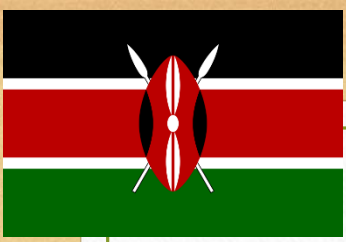
Good nutrition is a prerequisite for the national development of countries and for well being of individuals.

Kenya has adopted High Impact Nutrition Interventions (HiNi) that includes:

1. Breastfeeding promotion
2. Complementary feeding for infants after the age of six months
3. Improved hygiene practices included hand washing
4. Vitamin A supplementation
5. Zinc supplementation for diarrhea management

CONT'D

6. Multiple micronutrient
7. De-worming
8. Iron-folic acid supplementation for pregnant women
9. Salt iodization
10. Prevention or treatment for moderate under nutrition and treatment of severe acute malnutrition
- 11. Iron fortification of staple foods**



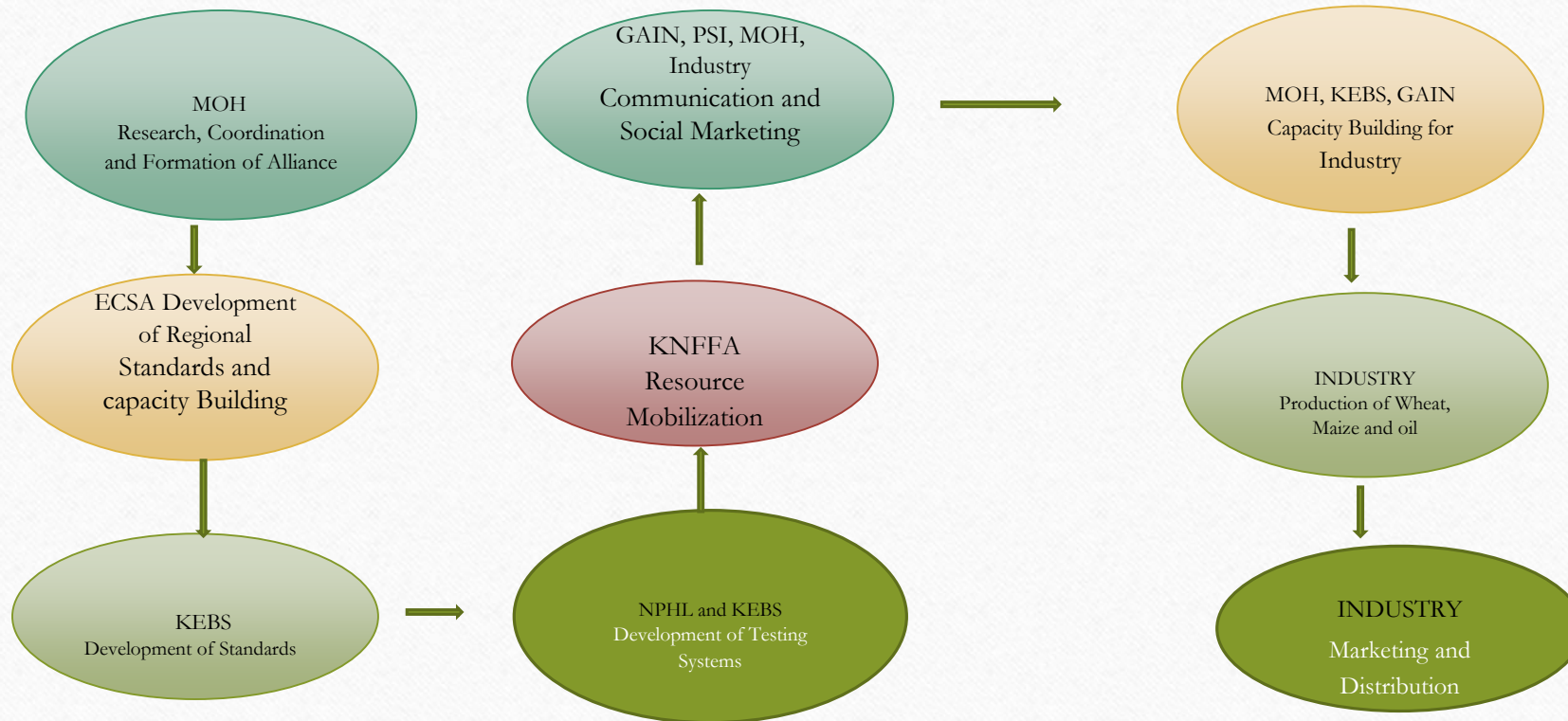
FOOD FORTIFICATION

OBJECTIVES

- To achieve annual production of 1,000,000 MT of fortified maize flour, 750,000MT of fortified wheat flour and 200,000MT of fortified vegetable oil,
- To establish a reliable system for monitoring the quality of fortified food samples,
- To raise awareness and consumption of fortified foods,
- To reach 27 million individuals in Kenya with fortified foods, to achieve mandatory fortification of staple foods.



Partnership, Sequence and linkages





Members of the Alliance

Ministry of Health
(Nutrition, Laboratory,
Food Safety,

Kenya Bureau of Standards

Industry (Flour, Oil, Sugar,
Salt)

Development Partners
(UNICEF, GAIN, MI, PSI)

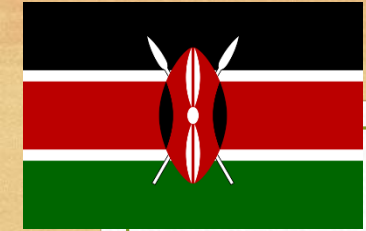
Premix Suppliers

Consumer Organizations



Standards

- It is now mandatory in Kenya through the Food, Drugs and Chemical Substances (Food Labelling, additives and Standards) Act Cap 254 Legal Notice No 62.
- Fortification Standards were developed for wheat and maize flour, sugar, oils and fats between 2005 to 2008



Food Fortification Logo





Maize Flour Fortification Levels

Nutrient	Fortification compound	Recommended factory average (mg/kg)	Regulatory requirements (mg/kg)	
Vitamin A	Vitamin A	2 ± 1	0.5	3.0
Thiamine (Vitamin B ₁)	Mononitrate	10 ± 5	5.0	15
Riboflavin (Vitamin B ₂)	Riboflavin	6 ± 3	2.5	9
Niacin (Vitamin B ₃)	Niacinamide	60 ± 15	40	75
Folates	Folic acid	1.5 ± 1.0	0.5	2.5
Pyridoxine (Vitamin B ₆)	Pyridoxine	6.5 ± 3.5	3.0	10
Cobalamine (Vitamin B ₁₂)	Vitamin B ₁₂	0.015 ± 0.005	0.005	0.025
Iron	NaFe EDTA	40 ± 10	30	50
	Total iron	50 ± 10	40	60
Zinc	Zinc oxide	40 ± 10	30	50



Wheat Fortification Levels

Nutrient	Fortification compound	Recommended factory average (mg/kg)	Regulatory requirements (mg/kg)	
Vitamin A	Vitamin A	0.5 ± 0.02	0.2	1.0
Thiamine (Vitamin B ₁)	Mononitrate	4.0 ± 2.0	1.5	6.0
Riboflavin (Vitamin B ₂)	Riboflavin	3.5 ± 2.0	1.5	5
Niacin (Vitamin B ₃)	Niacinamide	25 ± 5	15	30
Folates	Folic acid	1.5 ± 1.0	0.5	2.5
Pyridoxine (Vitamin B ₆)	Pyridoxine	5.0 ± 2.5	2.0	7.5
Cobalamine (Vitamin B ₁₂)	Vitamin B ₁₂	0.005 ± 0.002	0.002	0.010
Iron	NaFe EDTA	10 ± 5	5	15
	Total iron	20 ± 5	15	30
Zinc	Zinc oxide	30 ± 10	20	40



Fats and Oils Fortification Levels

- Vegetable fats and oils shall be fortified with Vitamin A in accordance with the Kenya Standard for Edible Fats and oils (KS326-2”2009)



Communication Launch





Billboards





On-ground Activation





Cont'd





ACHIEVEMENTS

- 38 companies signed an agreement with the Ministry to start procurement of equipment, installation and roll out fortification.
- The Ministry conducted an assessment to establish industry requirements.



CONT'D

- A training package on production, quality assurance was developed by MOH and KEBS.
- A logo that helps to identify the fortified foods was developed and a social marketing and communication campaign was launched
- The systems for testing and certification in place.



CHALLENGES

- Initially uptake was slow especially in the first year due to lack of reliable suppliers of vitamins and minerals
- Long processes of importing the required equipment
- Inadequate capacity for internal quality assurance and control at regulatory level and production.
- Government under pressure to build systems for certification and monitoring at market and household level

CONSTRAINTS

- Resources



CONCLUSION

- The Ministry of Health and the Bureau of Standards is in charge of monitoring the quality of fortified foods in the market and at household level.
- The strong partnership between government and private sector led to the achievements made this far



THANK YOU ASANTE SANA

