Affordable Nutritious Food for Women

Small and Medium Scale Fortification of maize flour in Kenya and Tanzania

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ANF4W – A development partnership with the private sector

Objective: Improved intake of micronutrients by women of reproductive age

Countries:
- Ghana: Local SMEs develop fortified complementary food products targeting WRA
- Bangladesh: Agronomic biofortification of rice and potatoes with zinc homestead food production
- Kenya & Tanzania: SME mills fortify maize flour and sunflower oil

Private partners:
- Ghana: Ajinomoto, DSM / Sight & Life
- Bangladesh: Aglukon, Bayer CS
- Kenya & Tanzania: BASF, Mühlenchemie

Nutrition behaviour change communication

Regulatory environment
A case for fortification of maize flour by SME millers…

- 95% of rural households regularly prepare meals with maize flour (ANF4W baseline in Morogoro and Arusha).
- Maize flour is predominantly locally produced by SME mills.

Source: FFI, GAIN FACT survey 2015
Situation of Food Fortification in Kenya & Tanzania

- Fortification of edible oil with Vitamin A and wheat and maize flour with Iron, Zinc, Folic Acid and other B-Vitamins is mandatory since 2012
- Tanzanian Food Fortification law applies to large scale producers only
- Kenyan Food Fortification law applies to packaging, commercial producers
- In 2015, 2% of households consumed fortified maize flour in Tanzania (FACT survey 2015)

Source: GAIN FACT survey 2015
Characteristics of SME maize mills in Kenya and Tanzania

Ca. 2000 commercial hammer mills
Producing 0.2-10 MT/d

+ 10,000 (?) non packaging hammer mills

Ca. 100 medium size roller mills
Producing 5-80 MT/d

+ 10,000 (?) non packaging hammer mills
Opportunities and challenges

**Challenges**
- Most SMEs are not registered with KEBS/TFDA, many do not fulfill the requirements to be registered
- Lack of knowledge on how to technically start fortification
- Availability of dosifiers
- Access to quality premix
- Incremental costs that cannot be passed on to the end-consumer
- No legal obligation to fortify (TZ) or no enforcement by public authorities
- High price volatility of maize (40% annual variation)
- Lack of working capital
- Low mill utilization rate (25-35% in Meru County)

**Opportunities**
- Generally high willingness to fortify
- Selling to low-income populations that are not covered by large industry products
- Inclusive businesses, creating employment for low-educated populations outside main cities
- Potential to develop with technical and business support
ANF4W’s approach: Technical support to millers to start fortification

Technical challenges

- Many SMEs are not registered with KEBS/TFDA, many do not fulfill the requirements to be registered
  - Capacity assessment prior to selection of mills that are committed to registration, assist through registration process, provide assistance to comply with regulations
- Lack of knowledge on how to technically start fortification
  - Advocacy and training of millers, support miller associations to enhance sharing of knowledge
- Availability of dosers
  - Rental of dosers for hammer mills through SANKU, advise on dosers for roller mills and help with installation
- Access to quality premix
  - Coordination of premix supply through SANKU
ANF4W’s approach: Social marketing to increase demand

800,000 in Tanzania (Morogoro and Arusha) and 900,000 in Kenya (Meru County) people have been reached with community activation and radio to promote diverse diets and fortified foods as complementary measures to improve micronutrient intake, particularly by women of reproductive age.

„Before people asked us to turn off the premix feeder when milling their maize. Now they come and ask to turn it on.“

Owner Family Choice Mill, Morogoro
ANF4W’s approach: Improve regulatory framework and fortification monitoring

- Support devolution of fortification compliance monitoring
- With ANF4W support, three districts councils in Tanzania are preparing a district by-law, which will make flour fortification mandatory for packaging SME mills in the district.
- Health/food inspectors at district level trained in fortification monitoring.
- Promote public budgeting for fortification monitoring: TFDA’s annual budget for fortification monitoring has increased by 50% since 2014
24 maize flour mills in Morogoro Region / Tanzania, which started fortification under the USAID Tuboreshe Chakula project, continue to get technical support. 40 additional mills are currently selected to receive new dossifiers.

One medium size mill in Meru county started fortifying, four more mills are currently supported to begin fortification.
SME mills in Morogoro Region, Tanzania, produce 4,000 MT/year of fortified maize flour serving 60,000 people. This is expected to increase to 180,000 people in 2017.

SME mills in Meru County, Kenya, produce 10,000 MT/year of fortified maize flour serving 140,000 people. This is expected to increase to 350,000 people in 2017.
Conclusion

- Maize fortification at SME mills has a high potential to improve micronutrient intake
- Additional cost of fortification are app. 2% of total production costs
- Social marketing increases demand, but millers still feel that they cannot add the costs of fortification to the retail price
- Fortification regulations should be extended to commercial, registered SME mills
- Further capacity development (not only training) of decentralized public sector authorities in fortification compliance monitoring is necessary
- Clustering of mills would improve access to capital, storage of maize, sharing of quality control, and joining premix orders