This presentation is part of the

Agriculture and Nutrition Global Learning and Evidence Exchange (N-GLEE)

held in Kampala, Uganda from December 10-12, 2012.

For additional presentations and related event materials, visit: http://spring-nutrition.org/nglee-africa
Fortify West Africa
Experiences in Implementing Large-Scale Food Fortification

Agriculture and Nutrition Global Learning and Evidence Exchange (N-GLEE)
December 10-12, 2012
Kampala, Uganda

Shawn K. Baker
Vice-President, Regional Director for Africa
Helen Keller International
www.hki.org
A Growing Regional Partnership for Sustainable Control of Vitamin and Mineral Deficiencies
Food Fortification:

• Practiced in North America, Central America and Europe for decades

• Add vitamins and minerals to what people already eat – no change in taste, color

• Potential vehicles in West Africa:
  • Cooking oil
  • Wheat flour
  • Sugar
  • Bouillon cubes
Unique Features of Fortification

• Requires strong private sector/public sector alliance
• A public health intervention – but health sector is not key player
• An intervention that “starts at scale”
• A food intervention that does not require behavior change – but does require communication
• Is not targeted – general population
Vitamin & Mineral Deficiencies: Control Strategies

Optimal breastfeeding

Biofortification:
- Conventional (orange-fleshed sweetpotato)
- Transgenic (Golden Rice)

Supplementation

Diversifying diets (enhanced homestead food production)

Food fortification
Fortification: Pathways to Impact

• Enhanced intake of vitamins and minerals by general population

• Enhanced vitamin A in breastfeeding:
  – Vitamin A content of breastfeeding dependant on mother’s status
  – Breastmilk major source of vitamin A for infants

• Direct consumption by older infants and children
Fortification: Where does it “Sit”? 

• CAADP – Pillar 3: Prioritizes food fortification
• Feed the Future programs can include food fortification
• Because of multi-partner nature requires alliances:
  – Industries
  – Consumers
  – Ministries of Industry, Commerce, Health
  – Technical and Financial partners
KEY ELEMENTS in FORTIFICATION (1):

• Population-based identification of food vehicles (usually with FRAT)
• Industry assessments
• Legal framework
• Production
• Quality assurance
• Public awareness raising on fortification
• Private marketing of fortified foods
• Monitoring and evaluation
KEY ELEMENTS in FORTIFICATION (2):

• Population-based identification of food vehicles (usually with FRAT)
• Industry assessments
• Legal framework
• Production
• Quality assurance
• Public awareness raising on fortification
• Private marketing of fortified foods
• Monitoring and evaluation
KEY ELEMENTS in FORTIFICATION (3):

• Population-based identification of food vehicles (usually with FRAT)
• Industry assessments
• Legal framework
• Production
• Quality assurance
• Public awareness raising on fortification
• Private marketing of fortified foods
• Monitoring and evaluation
Economic Community of West African States (ECOWAS) – emerging common market

- West African Health Organization (WAHO) - official health agency of ECOWAS

- ECOWAS Nutrition Forum networks nutrition actors in region – coordinated by WAHO

- Nutrition one of WAHO program priorities

- 2006 Health Ministers Resolution for Food Fortification
Union Économique et Monétaire Ouest Africaine (UEMOA) – subset of ECOWAS

• Already use common currency (CFA Franc)
• “Leader” in ECOWAS-wide integration standards
• Existing professional association of cooking oil producers (AIFO-UEMOA)
• Professional association of millers (AIM-UEMOA) - 2008
<table>
<thead>
<tr>
<th>Description</th>
<th>Estimated Percentage/Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated prevalence of iron deficiency anemia in children &lt; 5 years</td>
<td>61%-83%</td>
</tr>
<tr>
<td>Estimated number of maternal deaths from severe anemia per year</td>
<td>15,680</td>
</tr>
<tr>
<td>Estimated number of children born mentally impaired per year</td>
<td>1,115,500</td>
</tr>
<tr>
<td>Estimated number of child deaths attributable to vitamin A deficiency per year</td>
<td>214,750</td>
</tr>
<tr>
<td>Estimated number of neural tube defects per year</td>
<td>19,360</td>
</tr>
<tr>
<td>Number of countries at risk of zinc deficiency</td>
<td>13 out of 15</td>
</tr>
</tbody>
</table>
Fortification Rapid Assessment Tool (1):

• Developed by PATH Canada (commissioned by the Micronutrient Initiative)

• Estimates food intakes of children and women of reproductive age through 24 h recall and weekly frequency

• Identify major potential food vehicles for vitamin A and iron (and B complex, zinc)

• Provides qualitative information on availability and use of potential vehicles

• Strata chosen to reflect major differences in consumption of processed foods (urban, rural, etc.)
FRAT (2): POTENTIAL VEHICLES:

Summary of work in Burkina Faso, Cameroon, Côte d’Ivoire, Guinea, Mali, Mauritania, Niger, Senegal:

• Cooking oil
  • Cotton-seed
  • Peanut
  • Refined palm oil
• Wheat flour
• Sugar
• Bouillon cubes

Woman carrying sugar home from market
FRAT (3) SENEGAL:

- Rural North
- Greater Dakar
- Rural South
- Secondary Cities
FRAT (4) SENEGAL:

% Children 6-59 months having consumed in last 24 hours

<table>
<thead>
<tr>
<th>Food</th>
<th>Dakar</th>
<th>2° Cities</th>
<th>Rural South</th>
<th>Rural North</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oil</td>
<td>87.6%</td>
<td>88.1%</td>
<td>55.2%</td>
<td>80.0%</td>
</tr>
<tr>
<td>Sugar</td>
<td>94.8%</td>
<td>95.7%</td>
<td>85.2%</td>
<td>91.4%</td>
</tr>
<tr>
<td>Wheat Flour</td>
<td>87.6%</td>
<td>86.7%</td>
<td>51.9%</td>
<td>80.7%</td>
</tr>
<tr>
<td>Cube</td>
<td>90.0%</td>
<td>95.7%</td>
<td>93.8%</td>
<td>98.5%</td>
</tr>
<tr>
<td>Tomato paste</td>
<td>58.6%</td>
<td>66.2%</td>
<td>40.0%</td>
<td>49.7%</td>
</tr>
</tbody>
</table>
INDUSTRY ASSESSMENTS:

Summary of work in Benin, Burkina Faso, Cameroon, Côte d’Ivoire, Guinea, Mali and Senegal:

• Fortification is technically and economically feasible
• Fortified foods cannot be expected to reach all deficient populations
• Fortifying 2 or 3 vehicles with the same micronutrient may provide an effective approach: increase intake of this nutrient and cost is shared among several industries
• Industry is receptive to the idea of fortification – wants “level playing field”
• Some food-specific issues to resolve
Reasons for Prioritization:
• High levels of penetration
• Production highly centralized
• Costs the lowest of all potential food vehicles
• Technically easiest of vehicles to fortify
• No negative perceptions related to consumption of these products
• Industry commitment
West Africa Milestones (1):

- ECOWAS resolution on salt iodization (1994)
- Commitment of AI FO-UEMOA to vitamin A fortification of cooking oil (2004)
- UEMOA Commission standardization of salt iodization norms (2005)
- Assembly of Health Ministers (AHM) resolution on mandatory fortification of cooking oil and cereal flour (2006)
- Second private sector/public sector dialogue on food fortification (2007)
- Launch of “Faire tache d’huile” and “Fortify West Africa” (2007)
- UEMOA consultation to adopt regional norms for vitamin A fortification of cooking oil and fortification logo (2007)
West Africa Milestones (2):

- AHM recommendation to ECOWAS Commission to accelerate mandatory fortification (2008)
- Flour Millers’ Meeting & creation of AIM-UEMOA (2008)
- African Development Bank/WAHO study on UEMOA/non-UEMOA ECOWAS harmonization (2009)
- UEMOA consultation to adopt regional norms for fortification of wheat flour with iron and folic acid (2009)
- World Bank Institute case study on “Faire tache d’huile” (2009)
- Expansion to Cameroon (MSDF & UNICEF) & Mauritania (USAID/OFDA) (2009)
- Copenhagen Consensus Center presentations (Nairobi, New York) (November 2009)
- UEMOA-wide communication campaign on the “ENRICH” fortification logo - [http://www.youtube.com/user/afrohki](http://www.youtube.com/user/afrohki)
West Africa Milestones (3):
In the 8 UEMOA Countries

• Mandatory in 7 of 8 countries
• 50.23 million people are consuming vitamin A-fortified cooking oil:
  • 8.25 million children under five
  • 6.19 million pregnant or lactating women
• 45 million people consuming fortified wheat flour
West Africa Milestones (4):

- Development of a UEMOA Commission-led 5-year plan $800,000 engaged by Commission
- New Memorandum of Understanding (2012)
- 2012 Consensus statement on UEMOA/ECOWAS harmonization
- Mandatory in 11 of 15 ECOWAS countries
- Memorandum of Understanding underway with ECWOAS Commission
Lessons Learned in Program Implementation
CHAMPIONING:
• Developing evidence base
• Sensitizing and advocating
• Facilitating exchange of lessons-learned
• Brokering and sustaining partnerships
• Supporting legal framework
• Catalyzing regional approaches
• Facilitating public sector communication
• Mobilizing resources
• Documenting and disseminating
LESSONS LEARNED (1):

• On-the-ground presence essential to catalyze action – right people in right places

• Stay on message and be tenacious

• Seize opportunities

• Understand and **respect** points-of-view of diverse partners and **acknowledge** their contributions

• Maintain open, transparent, frequent communications

• Public sector and donors respond more slowly than private sector

• **Industry fortifies** – rest of us facilitate
LESSONS LEARNED (2):

• Regional bodies have catalyzed supportive environment for scale-up
• Regional approach does not substitute for country-level action
• Industries are eager to participate in food fortification – want “level playing field”
• Global food price crisis is making populations even more vulnerable to vitamin and mineral deficiencies
• Rapid urbanization and long-term trends in food processing increase reach
• Fortification is an iterative process and necessary to build in flexibility
Immediate Next Steps:

• Adoption of UEMOA-wide norms (cooking oil, wheat flour) and logo by Council of Ministers to render obligatory

• Ensure stewardship of “ENRICHI” logo and its use by all industries that are fortifying

• Update national and regional flour fortification recommendations to be in line with WHO interim guidance

• Support coordination of partners for UEMOA-led initiative

• Continue mobilization of co-funding
Next Steps – ECOWAS-Wide:

- Catalyze development of ECOWAS-wide industry associations (oil producers, millers)
- Accelerate adoption of UEMOA norms (oil, flour) and logo by ECOWAS Commission (based on AHM Resolution 2006)
- Support countries in implementing new norms, logo and import controls
- Continue mobilization of co-funding
Next Challenges:

• Rigorous Impact Evaluation:
  – ‘Model’ impact evaluation planned in Cameroon – additional resources

• Map out coverage of current food vehicles:
  – Assess value-added and feasibility of other potential vehicles
  – Make more explicit links with salt iodization
  – Potential for bouillon cube to complement salt iodization

• Assess value-added of other regional initiatives and role in other countries
Further Resources

• Helen Keller International fortification documents:  
  http://www.hki.org/reducing-malnutrition/food-fortification/large-scale-food-fortification/

• Videos from UEMOA-wide information campaign:  
  http://www.youtube.com/user/afrohki

• World Bank Institute Case Study:  

• Copenhagen Consensus Center:  

• World Health Organization interim guidance on wheat and maize flour fortification:  
  http://www.who.int/nutrition/publications/micronutrients/wheat_maize_fort.pdf

• Helen Keller International & University of California, Davis – Nutrition News for Africa:  
  http://www.hki.org/research-publications/nutrition-news-for-africa/
“Alone we can do so little; together we can do so much.”

- Helen Keller