Nutrition-sensitive value chain

Nutrition throughout the value chain

The bean value chain in Madagascar

Context

- **Chronic malnutrition (50.1%), Micro-nutrient deficiencies**
- **Potential for agriculture but under-developed**
- **Objective of the project : improve nutrition status and performance among children at school ; and contribute to iron deficiencies**

Steps

- **Research center to help fortify bean (fortification rate: 0,26g/kg)**
- **Bean fortified flour production**
- **Distributed at community level : primary schools and toby Seecaline (health nutrition center)**
- **Distribution together with sensitization**
- **Impact evaluation among children benefiting from the project, after 5 months (distribution 3 times a week) – evaluate malnutrition (weight/age) and school performance**

Study => showed positive results

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Strengths

- **Synergy between line ministers, private sector, NGO producer organizations, research center, centers at community level**
- **Project linked with on going projects (FIDA, training, part of PNAN component 2 and 5, to be integrated in other policies…)**
- **Perspectives : develop in other sub-regions, evaluate also anemia**

Challenges

- **Growing of a new variety (for farmers)**
- **Introduction of bean in children diet vs cultural belief (for consumer)**
- **Ministries coordination**
- **Importation taxes for iron / vitamin A ingredients for "chemical" fortification (trade constraints – coordination with Min. of Finance and trade needed)**

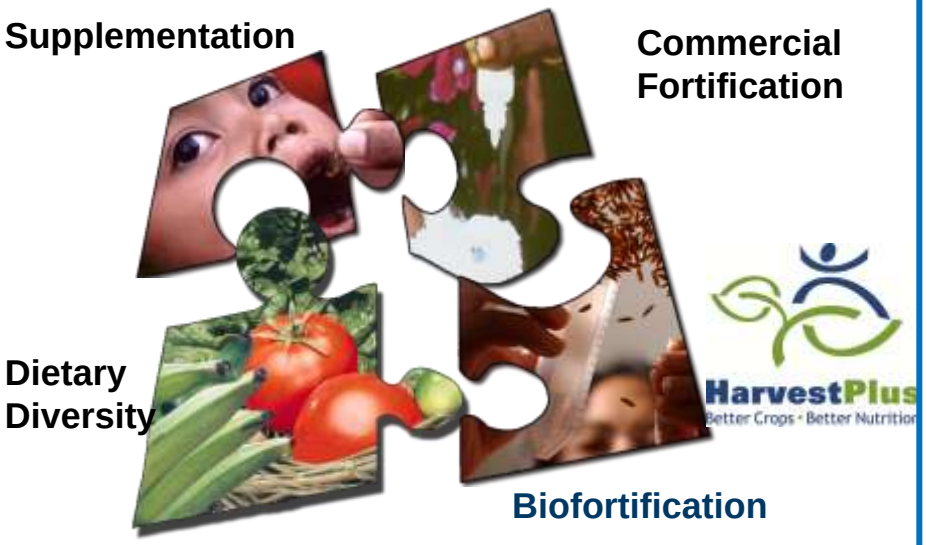
Nutrition throughout the value chain

Collaborative action in deploying biofortified crops in Zambia

Context

- **Maize 44% of crops, accounts for 57% daily caloric intakes, at least 43% of Agriculture budget**
- **Nutrition status : stunting (45%), vitamin A deficiency, anemia prevalence, underweight (15%)**

=> Food Security with limited Nutrition Security - So much Maize !!



1. **Dietary diversity : cook books for utilization, utilization of fish and animal sources of micronutrients**
2. **Supplementation (e.g. vit. A capsule supplements)**
3. **Biofortification : provitamin A Maize and Sweet potato**
4. **Commercial fortification**

Nutrition throughout the value chain

Collaborative action in deploying biofortified crops in Zambia

Key success factors / challenges

- Consumption patterns and attitudes for new crops are difficult to change. Using diverse sources information (NGOs, Public, Private, CBOs etc) works better.
- Even rural populations respond to nutrition information
- Multi-stakeholder collaboration across private, public and NGO sectors is crucial to drive adoption of nutritious crops.

Key questions

- Integration of biofortification in Nation Agriculture Investment Plan ? YES
- Adoption of new variety ? How easily to sustain this production ?
- Definition of biofortification vs fortification (not biotechnology)
- Sugar fortification => implication in terms of consumption and price (private Sector !)
- Hybrid plants => Farmer depending on specific seeds produced by private companies

Nutrition throughout the value chain

Food safety-nutrition and food security linkages

Definitions and concepts

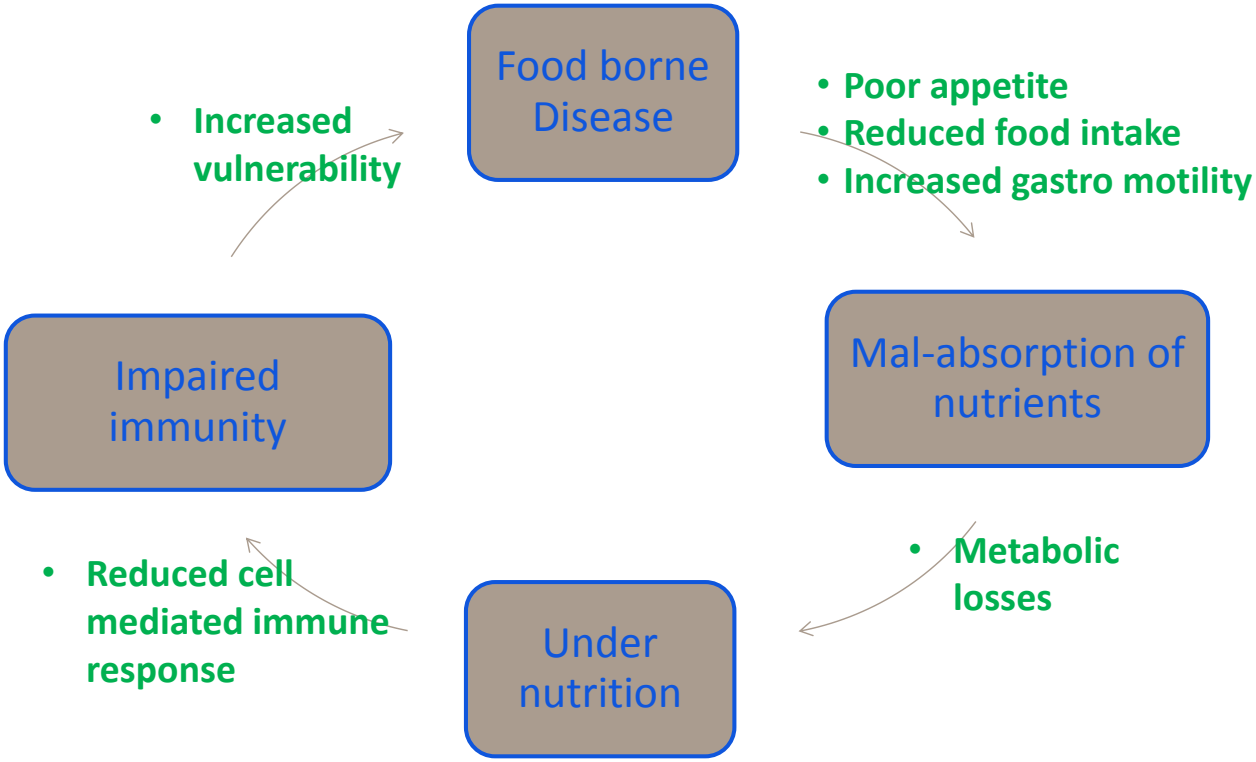
- **Food safety vs food security**
- **Food hazards vs risk**

Challenges

- **Food borne diseases : chemical/pesticides residues**
- **Aflatoxins. Effect : when plant stress in field or poor storage conditions. Impact on stunting !**

Nutrition throughout the value chain

Food safety-nutrition and food security linkages



Recommendations

- **Need structured process ; hazard identification, characterization, exposure assessment**
- **Food Safety Controls : require a value chain approach**
- **Shared responsibilities**

Nutrition throughout the value chain

1. **What are the salient issues / challenges for maximizing the nutritional impact of agriculture value chains? (How to..)**

Country Nutritional Situation Analysis

- **Scaling up – in terms of quantity and quality. Geographic coverage**
- **Building sustainability into this issue / ownership – at all levels (Government, NGO`s, Partners, farmers, food proccessors, sellers and consumers)**

- **Acceptance of improved crops by local producers/farmers and consumers**
- **Equiped with necessary information**

- **Lack of awareness / control on Food Safety issues, from production, transportation and storage.**
- **No clear understanding of the impact of food safety on nutrition**

- **Integrating food fortification into policy (processing)**
- **What would be the level of micronutriment needs for all / Agreement on the value addition – scientifically determined**
- **Biofortification / nutritional value addition (less honourable and susteinable)**

Nutrition throughout the value chain

2. What are possible strategies and practical solutions which have a high potential for maximizing the nutritional impact of agriculture value chains?

- **Training all producers, sellers and consumers on food safety issues**
- **Need for national food safety policy to support other policies**

- **CAADP => nutritionally prioritised crops**
- **Joint action plans /**

- **Communication / Sensitization on the importance of diverse food consuption**
- **Awareness of the importance of micro Nutriments**

- **Public Private Partnership (PPP) and involve the media in consumer awareness**
- **Building capacities (include education)**
- **Nutrition into primary school curricula**
- **Commercialize farming**

- **Mass Media Campain**

Nutrition throughout the value chain (cont.)

2. What are possible strategies and practical solutions which have a high potential for maximizing the nutritional impact of agriculture value chains?

- **Policy creation and enforcement**
- **Advocacy for policy integration**
- **Policy advocacy / evidence-based**

- **Look at vulnerability assessment: look at consumption of fortified and biofortified food**
- **Enforcement of standards and rules**

- **Coordination of stakeholders**

- **Educating the consumers**
- **Training of consumers and local producers**

- **Adapt new innovations based on indigenous knowledge**
- **Infrastructure sector and commerce to better accessibility**