






Overview of Dietary Strategies

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Dietary strategies: Advantages

- **Culturally acceptable and more likely to be sustainable**
- **Economically feasible**
- **Alleviate co-existing MN deficiencies**
- **Limited risk of antagonistic interactions**
- **Empower community to help themselves**

Dietary Strategies

- **Food Production & Availability** – Agriculture prog, home gardening, small livestock, aquaculture, preservation/conservation
- **MN Concentration** 
 - **Plant breeding (Biofortification)**
 - **Fortification: mass, point-of-use**
- **Bioavailability** 
 - **Home processing**
 - **Food - to - Food**
- **Promote Intake** 
 - **Education, Social marketing, Behavioral change ----**

Dietary strategies: Issues

- **Definition and Scope of coverage**
- **Integration of strategies**
 - **Monitoring of intake**
 - **Impact Evaluation**

Systematic approach for dietary strategies

- Apply both formative and laboratory-based research to develop dietary strategies
- Test feasibility/acceptability of strategies in community
- Implement strategies in community by:
 - nutrition education; behavior change interventions eg social marketing
- Conduct efficacy trial to assess:
 - knowledge/practices; nutrient adequacy
 - biochemical status
 - functional outcomes: growth; morbidity; cognition
- Carry out effectiveness trial: cost / benefit analysis

Dietary diversification and modification

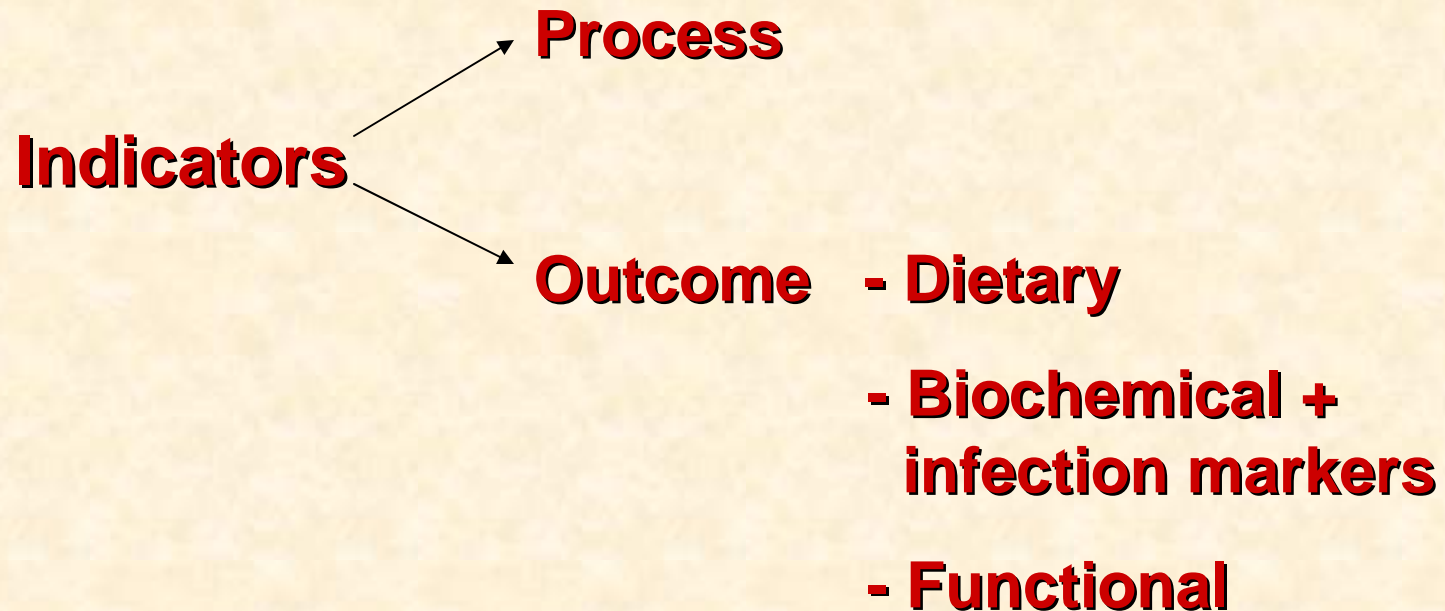
- Changes in food selection patterns and traditional household methods for preparing and processing indigenous foods
- Overall goal to enhance availability, access, and utilization of foods with high content and bioavailability of micronutrients

Dietary Diversification / Modification

? Does it Work ?

- **Multidisciplinary: Agriculture, Nutrition, Epidemiology, Education / Behavior modification --**
- **Design**
 - * **Comparison group – baseline data**
 - * **Appropriate sample size**
 - * **Control for confounders**

* Response to dietary interventions



* Statistics – Multivariate analysis

Poster: Dietary Diversification W1-W27

- Quality of breast milk
- Red palm oil enrichment
- Traditional foods/system
- Bioavailability-animal foods, fat on VA, brown rice, maize, beans on iron---
- Programs: Homestead food production, school meals ---

Biofortification Crops

Phase 1

Beans

Cassava

Maize

Rice

Sweet Potato

Wheat

Phase 2

Bananas

Barley

Cowpeas

Groundnuts

Lentils

Millet

Pigeon peas

Plantains

Potatoes

Sorghum

Yams

Nutrients:

Iron

Zinc

Vitamin A

Ref: www.harvestplus.org

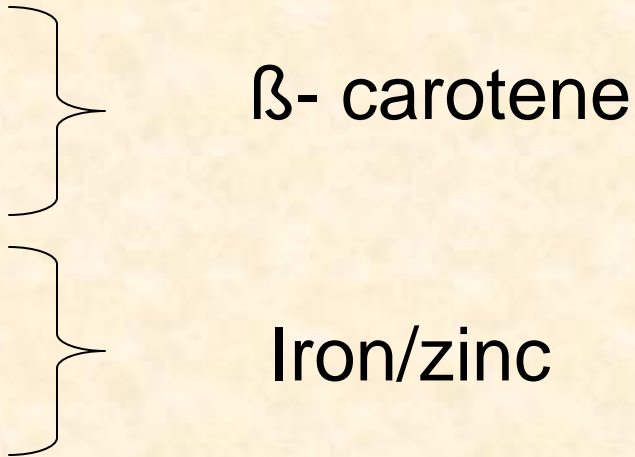
Oral Presentation

Oral: Biofortification

**Mozambique: Orange-fleshed Sweet Potatoes
improve Vitamin A status in young
children**

Dr. Jan Low

Poster: Biofortification W28-W34

- Sweet potato
 - Golden rice
 - Beans
 - Legumes
 - Genetic engineering of plants
 - Estimation of program impact
- β- carotene
- Iron/zinc
- 

Oral : Fortification

- **NaFeEDTA Fortified Soy Sauce in China-effective in the control of iron deficiency anemia**

Dr. Junshi Chen

- **Efficacy and Effectiveness of Iron in Complementary Foods, Rice and Wheat Flour**

Dr. Richard Hurrell

- **Levels of serum folate can be used to adjust the levels of folic acid fortification for NTDs reduction**

Dr. Omar Dary

- **Opportunities exist in West Africa for large scale food fortification eg edible oils and wheat flour**

Dr. France Begin

Poster: Food Fortification W35-W75

- Iodization of salt: technical to program, country experiences
- VA fortification in cooking oils: stability
- Effectiveness of sugar fortification
- Bioavailability/efficacy of various iron fortificants,
- Impact of iron/MN fortification programs-soy sauce,brown bread,biscuits,beverage,flour,rice
- Zinc in fortified food vs liquid supplements
- Programmatic applications- mass, community

Oral: Fortification at Point- of-Use

(In-home fortification)

Impact of MN-Sprinkles

- * Reduce anemia/iron deficiency-Indonesia children: Dr. Saskia de Pee**
- *Reduce anemia in children via an Integrated MCHN Program in Haiti: Dr. Purnima Menon**
- *Prevent anemia in children-Mexico: Dr.Lynnette Neufeld**

Poster: Fortification at Point-of-Use W76-W82

- Stability and safety of handspray iodization
- Iodized salt in humanitarian emergencies
- Sprinkles Global Health Initiative
- Feasibility and Efficacy of home-based fortification: country experiences- Southern Brazil, Pakistan, Mali, India