

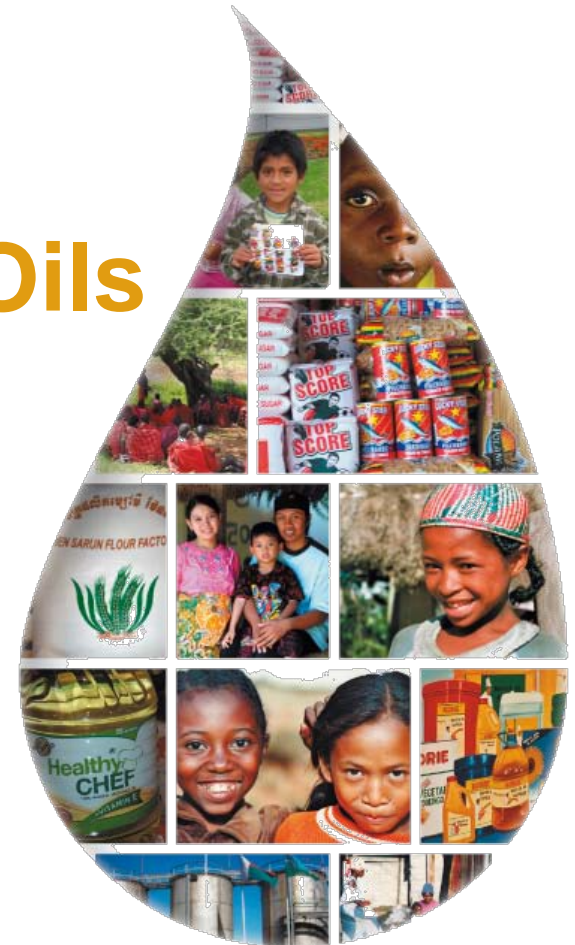
# SAFO

## Strategic Alliance for the Fortification of Oils and other Staple Foods

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GTZ SAFO Coordinator

**Dr. Andreas Blüthner**  
BASF SAFO Global Coordinator

GTZ Fachtagung Königstein  
The Future of Agriculture - “New Technologies”  
26<sup>th</sup> August 2010



# BASF - The Chemical Company At a Glance



## Chemicals

Inorganics

Petro-chemicals

Inter-  
mediates



## Plastics

Performance  
Polymers

Poly-  
urethanes



## Performance Products

Dispersions  
& Pigments

Care  
Chemicals

Nutrition &  
Health

Paper  
Chemicals

Performance  
Chemicals



## Functional Solutions

Catalysts

Construction  
Chemicals

Coatings



## Agricultural Solutions

Crop  
Protection



## Oil & Gas

Oil & Gas

Headquarter: Ludwigshafen (GER); employees ~ 105,000; production in 60 countries

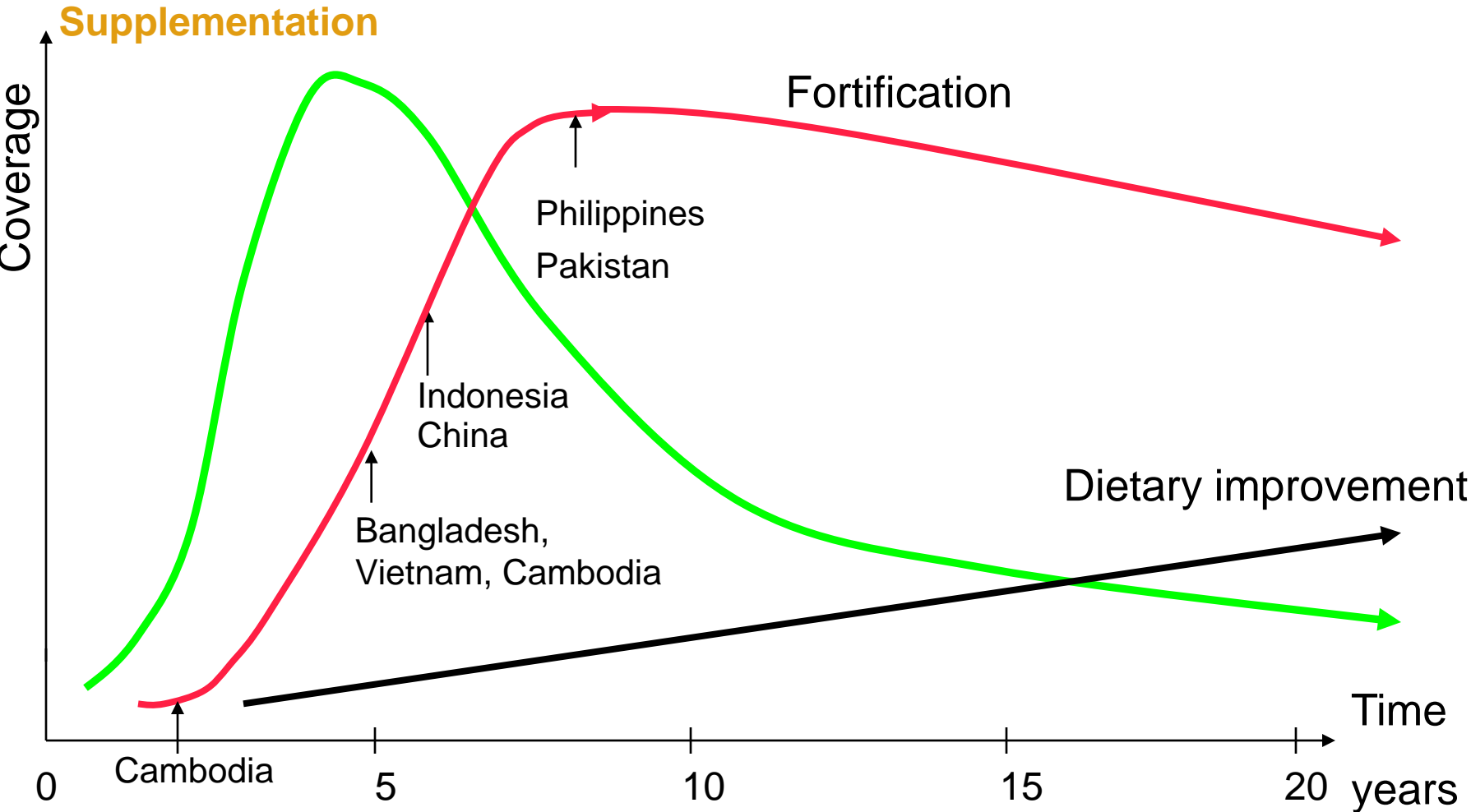


# SA+FO

## Why Fortification – The Context



# Micronutrient Malnutrition Supplements, Fortification, Dietary Diversification



# The MDGs, Human Rights & Vitamin and Mineral Deficiencies

**Goal 1: eradicate extreme poverty and hunger**

**Goal 2: achieve universal primary education**

**Goal 3: promote gender equality and empower women**

**Goal 4: reduce child mortality**

**Goal 5: improve maternal health**

**Goal 6: build global partnerships for development**

**Adequate Nutrition -> Human Right (Art.11, CESCR)**

**Right to food includes physical and financial access to food and nutrition (quantitative and qualitative dimension)**

# Micronutrient Malnutrition Cost-Effective Investment into Human Development

**Cost-benefit ratio:** Food Fortification: 1:200

*‘Every Euro invested in food fortification returns in 200 Euro benefits for human society’*

## Copenhagen Consensus Rating 2004:

Rating	Rank	Challenge	Opportunity	<a href="http://www.copenhagenconsensus.com">www.copenhagenconsensus.com</a>
Very Good	1.	Diseases	Control of HIV/AIDS	
	2.	<b>Malnutrition</b>	<b>Providing micro nutrients</b>	
	3.	Trade	Trade liberalization	

## Copenhagen Consensus Rating 2008:

Rating	Rank	Challenge	Opportunity	<a href="http://www.copenhagenconsensus.com">www.copenhagenconsensus.com</a>
Very Good	1.	<b>Malnutrition</b>	<b>Vitamin A/Zink Supplementation</b>	
	2.	Trade	Doha Development Agenda	
	3.	<b>Malnutrition</b>	<b>Food-Fortification</b>	


# The Agricultural Value Chain and Food Fortification From Agriculture to Improved Nutrition for the Malnourished

**Farmers**



Crop Production  
Food Security  
Affordability  
Quality

**Millers**



Food Production  
Food Safety  
**Food-Fortification**  
Affordability  
**Quality**

**Retail**



Food Distribution  
Accessibility  
**Logo & Labeling**  
Affordability  
**Quality**

**Public Sector**



Food Legislation  
Financing  
**Logo & Labeling**  
Taxes/Tariffs  
**Quality Control**

**Household**



**Food Habits**  
Affordability  
Accessibility  
**Nutrition**  
**Quality Control**



# Oil Fortification

## Product Type and Base-of-Pyramid Reach in Developing Country Markets

**Upper Market Segment**

Snacks, Milk, Bottled Oil...



**Middle Class**

Pouches

**BoP**

Barrels



Increasing Reach into Target Group





# SA+FO

## Approach and Contributions



# SAFO

## Goals and Approach

### Goal

- Improve nutrition for 100 million people in 8 target countries by 2011

### Approach

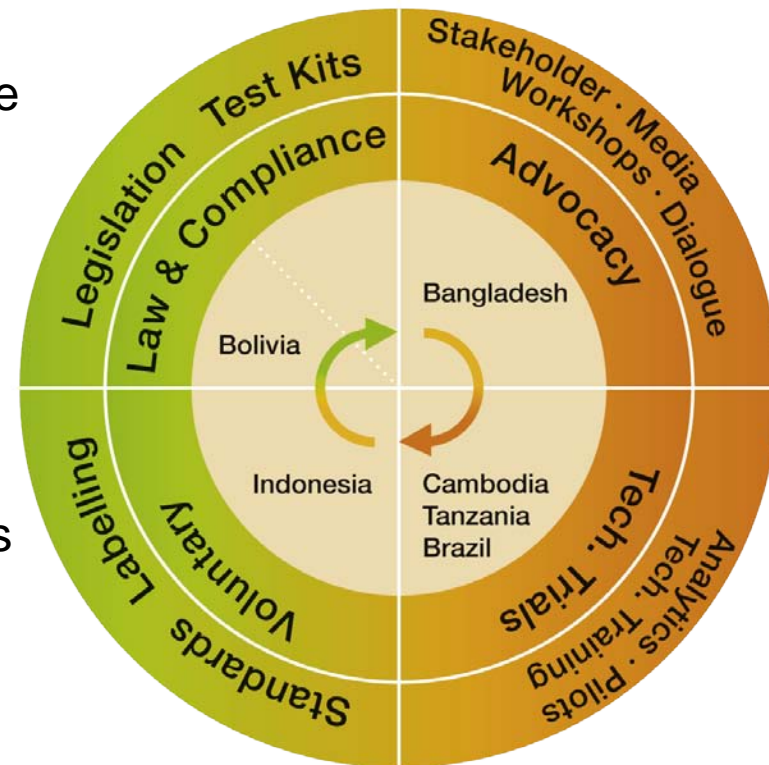
- Support local stakeholder collaboration and improve structures towards implementation
- Improved regulatory market environment for local producers
- Develop sustainable local business models with private sector
- Provide technical and analytical assistance to local food industries
- Sharing international food-fortification legislation and standards

→ **Cost-effective operational contributions**



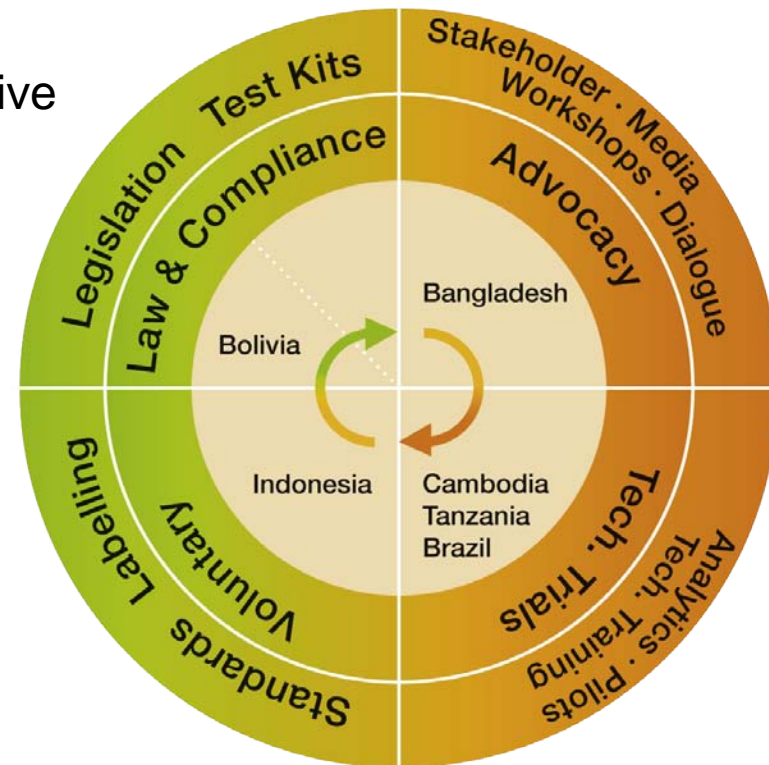
# SAFO 'Clock Model' (1)

- Advocacy stage
  - Facilitation of multi-stakeholder dialogue
  - Consensus building on optimal fortification levels
- Technical pilot phase (conducted by industry)
  - Technical capacity building for staple food producers
  - Business plans including CSR aspects and cost-effective BoP business models for producers



# SAFO 'Clock Model' (2)

- Voluntary regulatory standards
  - Setting standards, labelling and legislative support
  - Involvement of local media
- Regulation and compliance
  - Advice to national authorities on developing a long-term strategy on legislation
  - Support for the development of monitoring, evaluation and quality control capacities
  - Communication and marketing



# Food-Fortification in Context of 'Quality of Growth'

- Fulfillment of Human Right to Food (adequate nutrition)
- Realization of Millennium Goals 4 & 5
- Food safety (less food quantity ?) <-> Nutritional intake (more food quality ?)
- Addresses structural developmental problem, 'self-capacitisation'
- 'Re-engineering of market' approach of a PPP
- Geared towards reaching base-of-pyramid groups
- Improved competitiveness of local food producers vs. imports
- Applied corporate social responsibility in voluntary fortification
- Educational, productivity and health gains...

... a contribution to a more inclusive economy through value adding agriculture?

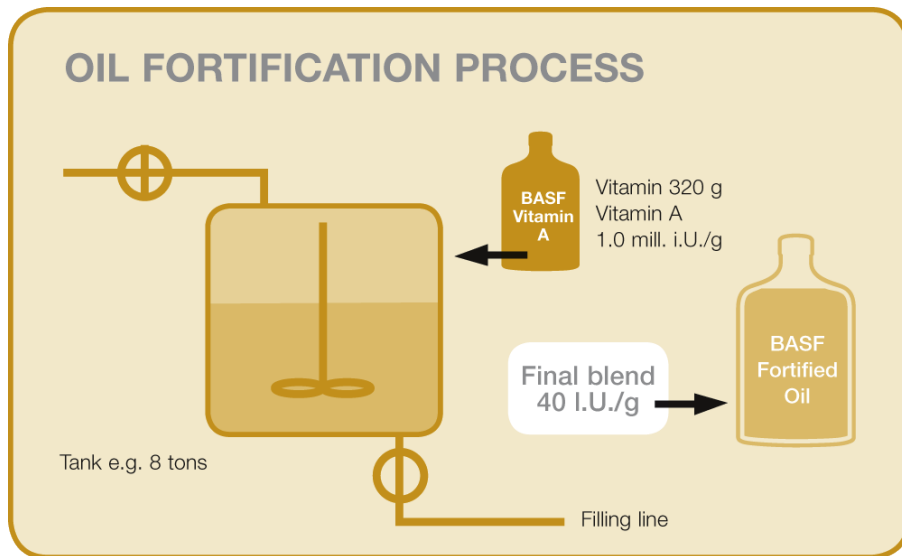
# SA+FO

## Quality Control and Technologies



# Quality and Cost Effectiveness

## Technical Capacity Building for Local Millers

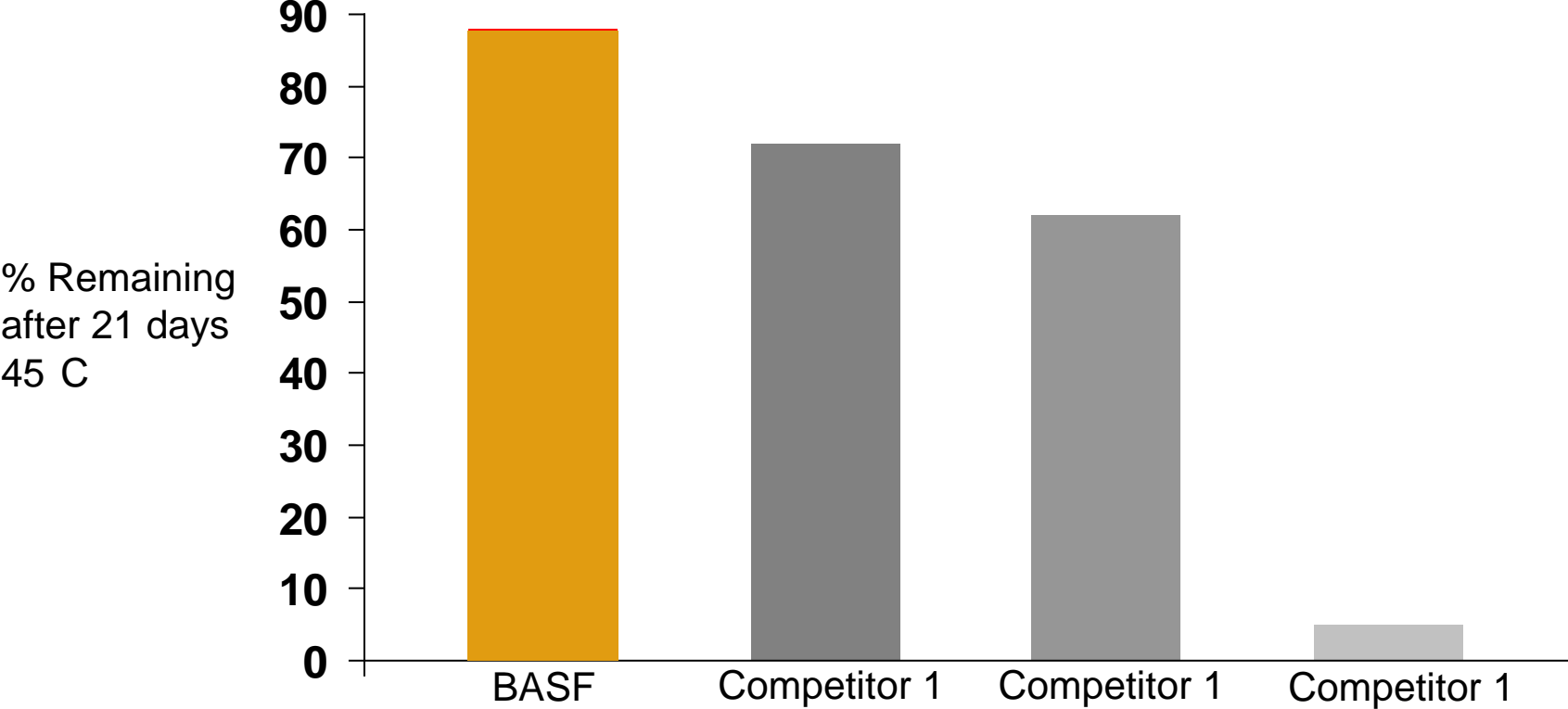


➔ **Technical Capacity Building is key for cost-effective production and accurate quality control**

# Quality and Cost Effectiveness

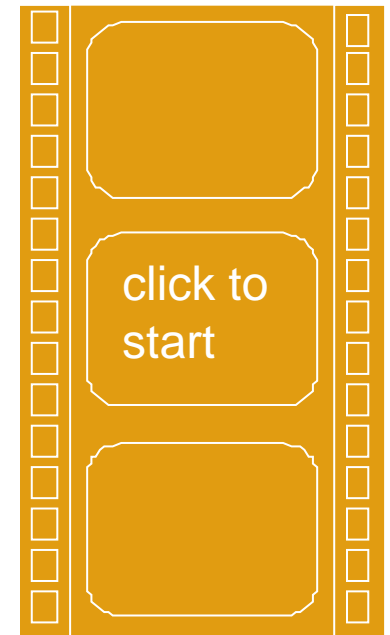
## Product Solutions: Highly Stable Vitamins

### Stability in flour





# Embedded Movie: Microencapsulation of Vitamin A



# Semi Quantitative/Qualitative Analysis Based on Vitamin A

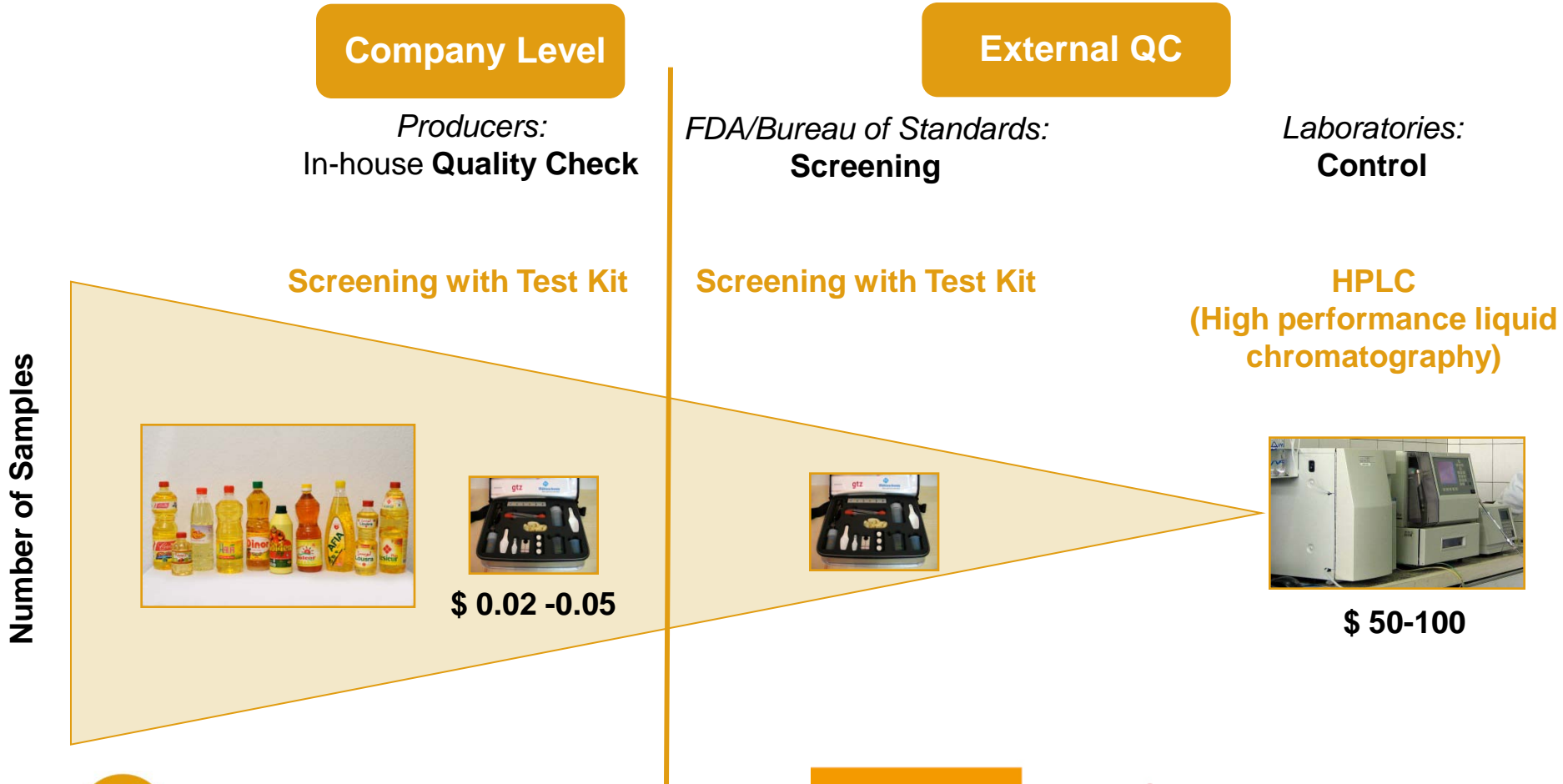
## Advantages of the Test Kit

- Portable and robust
- Complete, ready-to-use kit
- Easy to apply – low skills requirement
- Allows field testing of FF foods
- Testing is closer to end-users (market or household level)
- Reusable (just refill reagent)
- Cost-effective
- Complements extensive lab testing, e.g. by preliminary spot tests at household level



# Vitamin A

## Field Test Kits Towards Cost-Effectiveness in Quality Control/Monitoring



# THANK YOU FOR YOUR ATTENTION!

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[safo@gtz.de](mailto:safo@gtz.de)



# SA+FO

## BASF Agricultural Solutions



# BASF's Development in Agriculture

1880

2010 

## Fertilizers



## Herbicides



## Fungicides



## Plant Health



## Plant Biotech



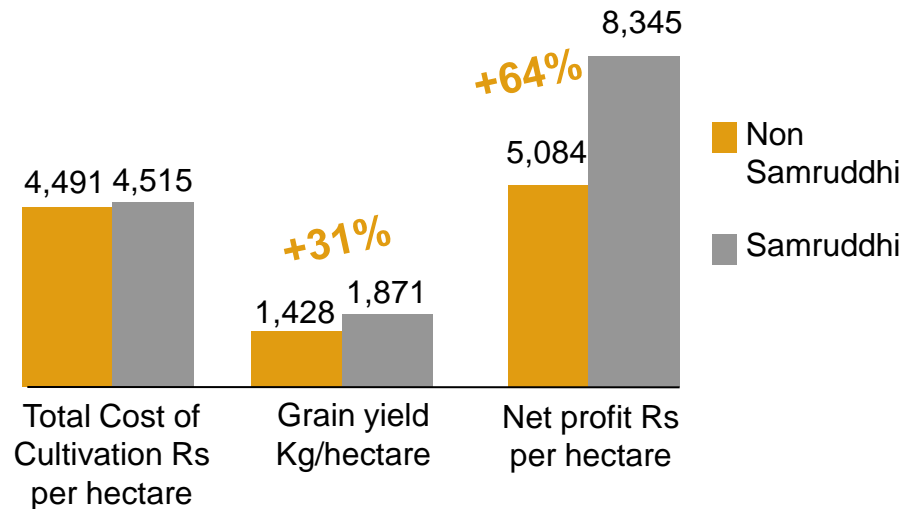
## Sustainability



# Samruddhi – Farmer Training Project in India

## Benefits for farmer & environment

- Work with 75,000 farmers during pre-season, season & post season in 2008
- Better knowledge about farming
- Proper use of fertilizers & crop protection products
- Optimized disease management
- Better quality seeds
- 2008 up to 31% yield increase in Soybeans and 64% increase of Net Return



Source: BASF, Samruddhi Project 2008



**Holistic approach helping farmers be more sustainable and profitable**

# Investments in Africa's Know-how

Supporting potential through local staff

Increasing farmer's profits through know how transfer

Offering safe use training

Offering a network across value chain



Offering technologies to use agricultural potential

Investing in R&D for a regional fitting portfolio

Advocating agricultural practices at international standards

Offering sustainable agricultural solution



# BASF Takes Action: Interceptor – Strong Weapon in the Battle Against Malaria

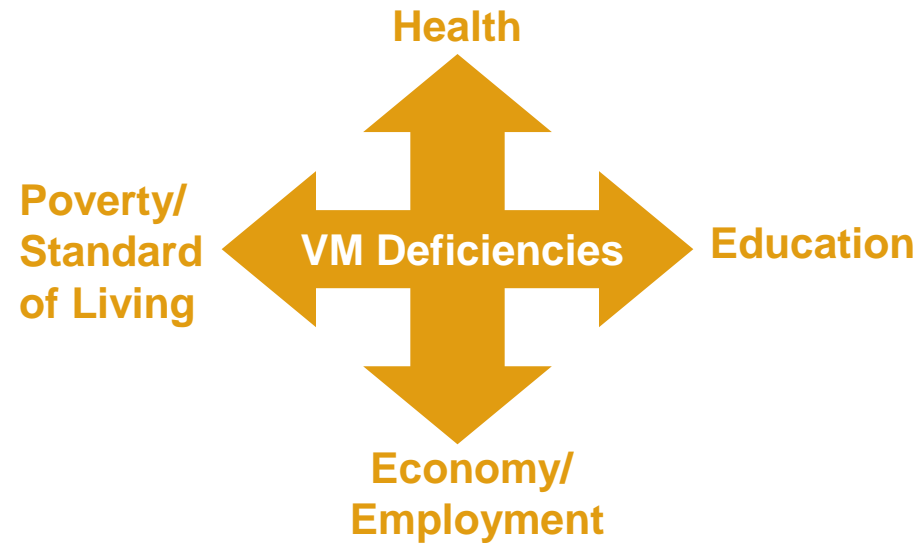
- Mosquito nets with long-lasting protection against insects
- Interceptor™ mosquito nets receive recommendation from World Health Organization
- Nets prevent disease transmission to humans



# Macro-Economic Benefits

## Estimated Economic Impact (GDP) in Selected Countries

Kenya	- 0.8%	~ 328 Mio US\$
Ghana	- 1.1%	~ 660 Mio US\$
S. Africa	- 0.4%	~ 2300 Mio US\$
Pakistan	- 1.7%	~ 256 Mio US\$
Iran	- 0.3%	~ 51 Mio US\$
Thailand	- 0.4%	~ 113 Mio US\$
China	- 0.2%	~ 274 Mio US\$
Phillippines	- 0.7%	~ 122 Mio US\$
Vietnam	- 0.6%	~ 476 Mio US\$
India	- 1.0%	~ 1102 Mio US\$
Uzbekistan	- 1.2%	~ 372 Mio US\$
Kazakhstan	- 0.6%	~ 300 Mio US\$
Peru	- 0.5%	~ 580 Mio US\$
Paraguay	- 0.7%	~ 112 Mio US\$



Data: UNICEF/MI Damage Report and US Government (2003)