

# Food Fortification- Does it work....

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# How Big is the Problem ???

- Over 2 Billion people worldwide suffer from Micronutrient deficiencies
- Undernutrition contributes to one-third of disease burden death and disability in the developing world
- Iron-deficiency anemia affects every second pregnant woman and over 40% of preschool children

Estimated reduction in GDP by 2% in developing countries

( source: UNICEF and World Bank)





Pellagra



Goiter

Cretinism

Anemia



Beri-Beri



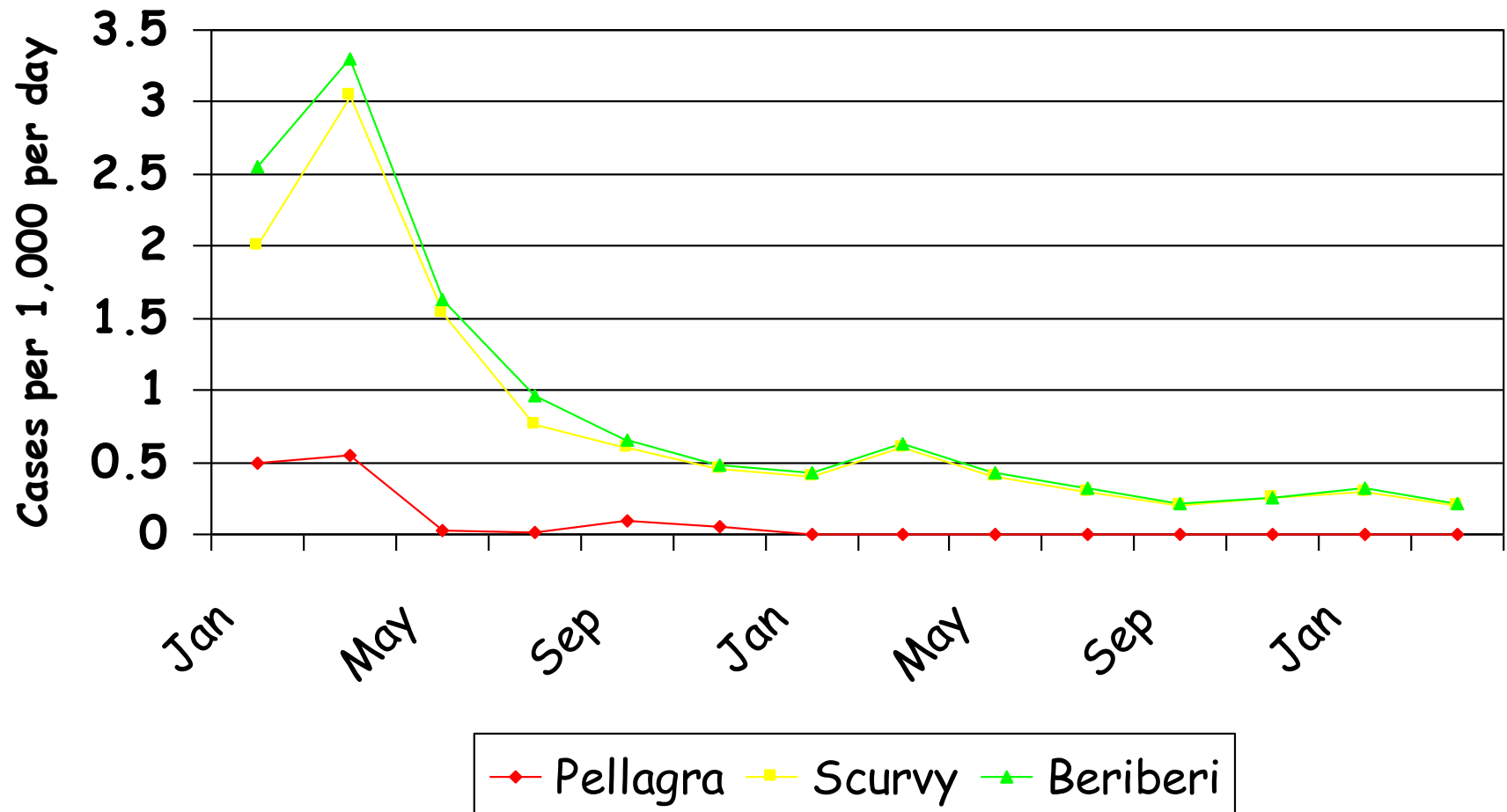
Anemia



How to Access Nutrients ???

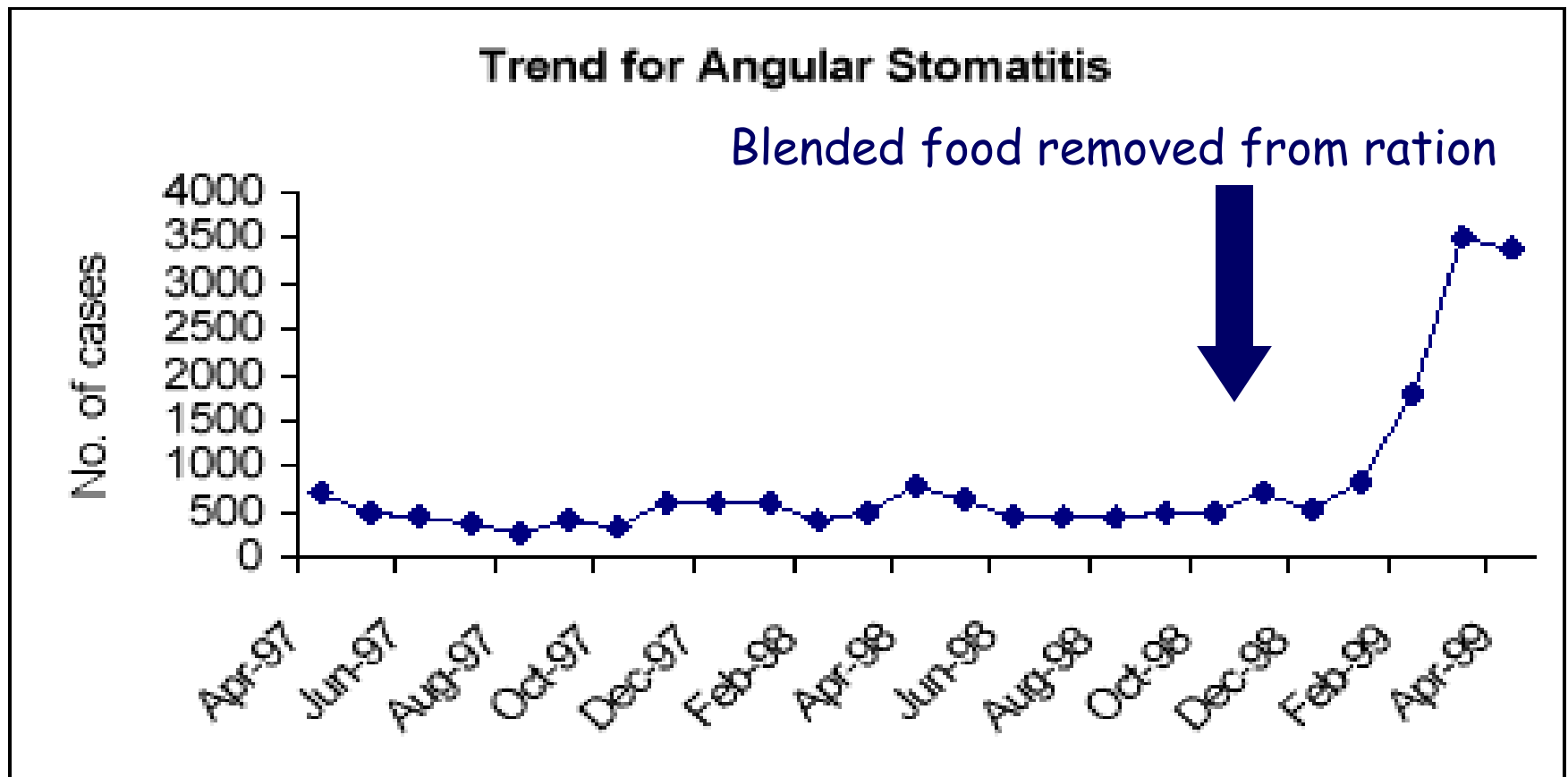


# Bhutanese Refugees in Nepal: MDD Surveillance (Jan '94 - Mar '96)



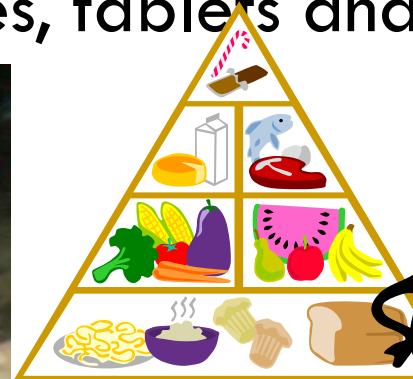
# Bhutanese Refugees in Nepal

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# Strategies

- Diet Diversity and nutrition education: consumption of local food and education on benefits of vitamin/minerals -health
- Food Fortification: addition of vitamin and minerals to staples, condiments etc
- Supplementation: Provision of Vitamin and Minerals through capsules, tablets and syrup



# Copenhagen Consensus 2008

World's top economists convened to prioritize how international development dollars should be spent

- Food fortification ranked **second** among all international development priorities
- Food fortification is viewed as highly cost-effective: benefit.

Source: Horton et al Copenhagen Consensus 2008- Malnutrition and Hunger – Executive summary



# WFP's areas of intervention

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1. Local production
2. Feasibility study
3. Factory inspection
4. Food fortification process
5. Quality assurance
6. New product development
7. Specification improvement
8. Partnership



New biscuit packaging



New oil packaging

# Fortified products:

- Flours (wheat flour, maize meal)
- Fortified Blended Foods (locally adapted formulations)
- Biscuits
- (Compressed) bars (BP 5, BP-100, Fig bars)
- Ready to Use Supplementary Foods (RUSF)
- Oil
- Noodles
- Improved Fortified Blended Foods (FBF+ & FBF++)
- Multi Micronutrient Powders
- Compressed bars



# Local Production

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Nepal, India, Bangladesh,  
Pakistan, Laos, Timor Leste,  
Myanmar, Cameroon,  
Afghanistan, Guatemala, Cuba,  
Senegal, Kenya, Malawi, Sierra  
Leone, Egypt, Turkey, Sri Lanka

...

➔ **Advantages:** closer to beneficiaries, use local resources (agricultural and human), benefit to local development, formula adapted to the specific needs and tastes of the recipients requires less storage, easier to maintain pipeline, reduce losses, decrease food insecurity in the area of production,



# Home Fortification

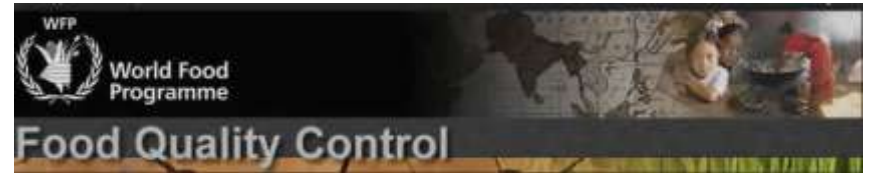






# Challenges:

- ❑ Building evidence
- ❑ Social Marketing/Trust/Awareness
- ❑ Food Safety and Quality Control
- ❑ Cost
- ❑ Advocacy
- ❑ Policy/Legislation-Regulatory approval-National and International
- ❑ Alliances-National/International
- ❑ Partnership: Engage Local Millers/Industries
- ❑ New (processing, analytical) technologies
- ❑ New products and packaging



**We must anticipate, not suffer the consequences of these challenges and keep up with innovations.....**

# Conclusions

No single strategy- mix of strategies

- ❑ Large Scale ( Mandatory Fortification)
- ❑ Deworming, prevention and control of diseases
- ❑ Dietary Diversification
- ❑ Health and Nutrition Education- Behavior Change Communication
- ❑ Supplementation

<http://foodquality.wfp.org>



# 1000 Days: Change a Life, Change the Future

A window of Opportunity not to be missed !!!!!!!

