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For additional presentations and related event materials, visit: http://spring-nutrition.org/agnglee-asia
2.6 A Addressing Micronutrient Deficiencies through Food and Agriculture Systems

- Deficiencies in essential vitamins and minerals required in small amounts by the body including:
  - Iron
  - Vitamin A
  - Iodine
  - Zinc
  - Folic Acid
- Deficiencies caused by:
  - Insufficient, poor or unvaried diets
  - Losses or poor absorption (due to infections like HIV/AIDS, malaria, diarrhea and parasites)
- Take home messages:
  - Vitamin and Mineral Deficiencies (VMDs) take a huge toll on health and economic development globally – over 2 billion people are effected globally, most important is Iron deficiency; accounts for 2-3% in GDP loss globally
  - Developing countries, particularly Asia, have the highest burden of VMDs
  - Solutions to the problem exist and are cost-effective; food fortification can be done in different food products to follow the life cycle
  - Key programmatic decisions include the selection of the food vehicle and choosing the right premix formula - Fortification needs to follow WHO/FAO guidelines
  - Some of the key challenges include governments’ reluctance to change national standards, legislation is not enforced and national/regional labs are lacking
- How to access additional information? – refer to the multiple studies referenced in the presentation, including one that looked at the impact of fish sauce iron fortification in Cambodia
- The presentation has discussed dietary diversity, supplementation, and commercial fortification and now will move to the 4th piece to the puzzle: biofortification
- Focus on 3 micronutrients that are most limiting vitamin A, zinc, and iron
- HarvestPlus is breeding food crops with higher micronutrient content that will have a measurable impact on nutritional status at the public health level
- Biofortification is being done globally – rice is most important for the Asia region
- Golden Rice containing higher vitamin A is being introduced in the Phillipines through PhilRice and IRRI and HKI, additional countries include Bangladesh, Indonesia and the Phillipines where simulation studies are being carried out
- For more information: www.irri.org/goldenrice, also multiple studies mentioned in the document

2.6 B Nutrition Sensitive Value Chains

- USAID and Gain are partnering to address both GHI and FTF goals
- Presented first tool: Nutritious Agriculture by Design: A Tool for Program Planning
  - Applications - Prompt redesign of existing agriculture projects for nutritional impact and the enhancement of specifications for new projects
  - Users are project/program designers and implementers
- 7 part tool
- One of the applications given was in Bangladesh on Cereal Systems Initiative for South Asia

- Presented second tool: *Nutritious Agriculture by Design: A Tool for Private Sector Engagement*, used to:
  - Identify specific market opportunities for locally producing and distributing nutrient-dense foods to people with nutritional deficiencies
  - Identify value chain challenges that need to be overcome in order to make these opportunities feasible
  - Structure of the second tool:
    - Part 1 – Defining products and routes to potential nutritional outcomes
    - Part 2 – Assessment of value chain challenges:
    - Part 3 – Business case
    - Part 4 – Overall assessment

- Example given for Orange Flesh Sweet Potato used to make “Golden Bread” – final results show what actions are required and where to target efforts
- For Orange Flesh Sweet Potato, a key area identified in the value chain was processing – Private Sector and Public Sector actions were found as areas for focus as a result of the process
- How to access more information? The tools were developed by Institute for Development Studies and GAIN. The first tool will be rolled out in a month, while the second is still under development

### 2.6.6 Targeting for Effective Nutritional Outcomes – the First 1000 Days

- Stunting is a critical constraint to national development and to individual development. However, it can be prevented through optimal maternal and child nutrition during the first 1,000 days of life
- There is an additional association between being stunted and being overweight later in life (LANCET and INCAPs longitudinal study)
- The presentation discussed the seven Essential Nutrition Actions. They are:
  - Optimal maternal nutrition
  - Optimal breastfeeding
  - Optimal complementary feeding
  - Micronutrients: Vitamin A, iron/folic acid (anemia), iodized salt
  - Treatment of the sick and malnourished child

- Common gaps in the diet are:
  - Sufficient staple foods all year
  - Protein
  - Iron and vitamin A
  - Fats & oils for energy dense foods
- Women’s use of time, women’s workload, and women’s control of income are important factors for maternal and child nutrition
2.6 D Technology and Tools for Maximizing Agriculture and Nutrition

- Digital Green is a nonprofit organization with offices in India and the US and is starting to branch out into African countries including Ghana and Ethiopia
- Started as a research project with emerging markets in Microsoft in 2006
- 125,000 farmers (primarily in India)
- Hope to reach 1 million farmers through national rural livelihood mission in 10,000 villages
- 60% of people in India depend on agriculture for their livelihood
- Wanted to improve upon the agriculture extension model to reach more farmers while being cost effective. The approach includes a hub and spoke model working through local partners—agriculture extension videos are developed at village level by trained village producers and disseminated locally
- Equipment used to diffuse messages in small groups (6-8 videos per village) and includes a pico projector and speakers – videos are screened weekly
- Efficiency of the model is 10x more effective than the classic model – 7x greater adoption of practices
- Farmerbook- latest technology platform. Local disseminator, every group socially mapped, videos watched, and in comparison to their neighbors
- Nutrition – started pilot work in Odisha to promote nutrition and hygiene focus
- Testing feasibility, working in 30 villages
- Using agriculture partner for nutrition messaging
- Conducting formative research (food taboos constraints, work load, influencers in community, etc)
- Where to find additional information? YouTube videos and Digital Green website – 1,000s of videos have been produced
- Save the Children presented on MCAID
- McAID: Mother and Child aid system
- Internet based software delivery system
- Internet based software and data base system to manage and operate though GSM supported modems
- Started in 2005, first phase of USAIDTitle II program
- Pda based system function on primary data office with no internet activity
- All tracking done without paper usage
- Fast and adaptable
- Monthly basis 250,000+ beneficiaries are registered, multiple components
- Service records and food records tracked
- Food distribution also done
- Data managed to quantify performance for food distribution and science
- Other partners using the system in Bangladesh including ACDI VOCA who is leading another Title II program
- Where to find additional information? – Can access the website via the presentation to see the functionality