



# FEED THE FUTURE

The U.S. Government's Global Hunger & Food Security Initiative

This document is part of the

## **Agriculture and Nutrition Global Learning and Evidence Exchange (AgN-GLEE)**

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For additional presentations and related event materials, visit: <http://spring-nutrition.org/agnglee-lac>



## Concurrent Sessions 2.5 Summary

### March 6, 2013

#### 2.5 A The Importance of Gender in Linking Agriculture to Sustained Nutritional Outcomes

- The session restated the importance of gender in agriculture: while women make up a large % of the agriculture labor force, they are disadvantaged in asset ownership, education, control of inputs and access to services
- Research shows that women produce more food than men for their families and the world, and that correcting gender imbalances could increase farm productivity by 20-30%, raise total national output by 2-4% and reduce the number of hungry people by 12-17% worldwide
- The role of women as caregivers also places them at the nexus of the relationship between agriculture and nutrition.
- To maximize this potential, programs have to invest in women and empower them. Key principles to overcoming gender based constraints to agricultural productivity while fostering nutrition include, among others:
  - Addressing the distinctive needs of women (in access to resources such as land, credit, etc)
  - Designing equitable access to the rewards from agriculture
  - Engaging both men and women in improving household nutrition
  - Fostering equitable participation in decision making processes at all levels
  - Promoting the use of gender analysis by decision makers, to improve the enabling environment
  - Improving our understanding of the performance of USG investments in supporting gender equity
- The role of information is vital to this program of action
- Discussion around the “Women’s Empowerment in AG Index” or WEAI, which was specifically designed to measure the degree of inclusion of women in agricultural sector growth that has occurred as a result of Feed the Future
- The index has two parts: the first part assesses whether women are empowered in 5 domains of agriculture (those relate to production, resource, income, leadership, time). The second part is the Gender Parity Index (GPI) which reflects the percentage of women who are as empowered as the men in their households.
- The compilation of the two parts provides a single, numeric score that can be used to track change over time in key dimensions; to monitor progress towards gender equality and to correlate with other key household measures such as economy, nutrition and education
- The two presentations were followed by a lively debate, many of the questions turning to methodological aspects of the WEAI: for instance: Since the tool assumes nuclear families, how does one look at gender empowerment in an extended family context? How do you address situations where there is a clear (but not necessarily unequal) division of labor between men and women? How do we account for seasonality and changes in workloads and responsibilities as those change through the year?

#### 2.5 B Changing Behaviors for Promoting Sustainable Outcomes in Agriculture and Nutrition

- Both presentations concurred in stating that SBCC is integral to changing nutrition practices, but also signaled that the business of behavior change is a complex undertaking. A key feature of this complexity is their contingency, that is, the importance of contextual factors in determining

individual and social behaviors. If SBCC strategies are to result in permanent and widespread behavior changes, they must be multi-faceted, repetitive, and they must target multiple audiences

- Now, what is SBCC? There are many ways to slice it, but for the purpose of Ag and Nut linkages we may think of it as “a strategic package of behavior-centered interventions aimed at supporting the sustained adoption of high impact ag & nutrition practices”
- Key intervention SBCC elements include:
  - The promotion of specific individual and group behaviors
  - The shifting of social attitudes, structures, and norms
  - The creation of enabling environments to promote and support positive change in ag & nutrition behaviors
  - And an explicit aim to DO NO HARM
- The tools at our disposal to carry out SBCC interventions include formative research, barrier analysis, and specialized communications techniques including outreach and mass media
- As for the interventions themselves, they must use scientific knowledge from the behavioral and social sciences and adopt evidence-based designs. They should also be permeated by a few key principles, including: country ownership, scalability, multi-sectorality, community-focus, gender equity, and link to the value chains
- Those concepts and principles were illustrated vividly by the second presentation that discussed a method devised by CCRP. The method aims to understand behaviors and contexts in which they occur, so we can see where the barriers to change are and to design our interventions by focusing on important stakeholders and on locally adapted solutions. Lastly, it seeks to measure change as we go, so we can learn iteratively from the experience
- This approach was illustrated using lessons from 3 case studies (Malawi, Peru, Bolivia) about how CCRP aimed at understanding food systems and how to improve them
- Each case study provided examples of the importance of using sensible science to the solution of complex problems. Simply growing more food is not enough to ensure good nutrition. Practices, both in the agricultural domain, as well as in MIYCN need to change also. To do that however, trust and confidence needs to be built. Flexible intervention designs are needed so we can incorporate lessons learned as we go

### 2.5 C The Role of Water in Linking Agriculture, Nutrition and Health

- Recent reviews in nutrition state that diets explain only a third of chronic malnutrition. A critical factor, above and beyond diet, relates to gut permeability and function. This is called “environmental enteropathy” (or EE), and relates to living in unsanitary environments (with diarrhea pathogens, toxins, etc)
- The causal pathway leads from poor sanitation to the ingestion of pathogens, which in turns leads to intestinal inflammation, activating the entire immune system—and you got EE, that is, a state of chronic gut inflammation
- The effects of EE on human health and nutrition are far reaching, and include the malabsorption of nutrients, oral vaccine failures, higher risks of infections, higher morbidity and mortality, reduced cognition and economic potential in the individual, and, obviously, malnutrition.
- A critical contributor to the transmission of those pathogens is water. Since agriculture needs water, the design of water systems for agricultural purposes has the potential to affect human health and nutrition in many ways:

- Agricultural wastewater, which contains a large number of pathogens that cause Gastrointestinal malfunctions
- Malaria infestation via the creation of mosquito breeding sites in retained water
- The third contributing factor to EE, more related to moisture stress than to water abundance is aflatoxins
- Looking at those factors in turn, the presentation discussed a variety of control methods for each of them. With regards to the propagation of diseases through wastewaters, methods may include:
  - The separation of animal water supplies from human ones, using barriers such as vegetative zones around crops, riparian buffers, manure management, etc
  - Keeping animals out of human living space
  - Handwashing and wearing protective clothing such as shoes, etc
- Techniques are also available to control malaria infestation, including the filling and draining of water bodies and other environmental schemes
- Aflatoxin production is triggered by environmental factors such as temperature and humidity; drought may also induce their propagation. In terms of countering measures, aflatoxin production can be minimized by good drying practices and by storage minimizing moisture
- New knowledge and techniques are emerging to address aflatoxin and other factors leading to EE. Those include low-cost, scalable and sustainable water treatment methods; as well as more scientific data on the benefits, costs and risks of aflatoxin removal.
- Those promise to offer better, more effective scalable interventions. Clearly, however, integrated strategies will be critical if we are to aim at improving agriculture on the one hand, while considering on the other hand the effect that irrigation canals, water ponds and moisture stress have on human nutrition & health.