Agriculture for Improved Nutrition and Health

CGIAR Research Program

Current progress
New CGIAR structure and relations
1: Integrated Agricultural Systems for the Poor and Vulnerable (dry area; humid tropics; aquatic agricultural systems)
2: Policies, institutions, and markets to strengthen assets and agricultural incomes for the poor
3: Sustainable staple food productivity increase for global food security (rice; maize; roots, tubers and bananas; grain legumes; dryland cereals; livestock and fish)
4: Agriculture for Improved Nutrition and Health
5: Durable Solutions for Water Scarcity and Land Degradation
6: Forest and Trees
7: Climate Change, Agriculture and Food Security
The vision is to transform agriculture so that it significantly contributes to improvements in nutrition and provides health benefits and reduces health risks in a quantifiable, accelerated and sustainable way.
The Challenge

• > 925 million hungry people
• **Maternal & child undernutrition** associated with > 1/3 child deaths; 10% burden of diseases *(Lancet 2008)*
• **Zoonotic diseases** (HIV, H5N1) are an increasing threat
• **Agriculture-related health losses** account for 25% of all DALYS lost; 10% deaths in LDC *(Gilbert et al. 2010)*
• **Economic costs** are huge:
  – Severe acute respiratory syndrome (SARS), a zoonotic disease: $50-100 billion *(Aquirre, 2009)*
  – Avian Influenza pandemic: $1 trillion *(Burns et al. 2008)*
  – Cost of undernutrition to economic development: $20-30 billion/y *(UNICEF 2006)*
Agriculture - Nutrition - Health disconnect

• Separate research and practice institutions, methods, metrics, mindsets, incentives and languages...

• Agricultural success does not consider nutrition and health outcomes

• Countries with good economic and agricultural growth often not seeing reductions in malnutrition (e.g. India)
Key Goal of CRP4 Research Program

Maximizing Benefits
- Livelihoods
- Incomes
- Employment
- Food security (quantity & quality)
- Gender equity

Reducing Risks
- Food borne diseases
- Water-related diseases
- Zoonotic diseases
- Occupational hazards

NUTRITION

Agriculture

HEALTH

TARGET POPULATIONS
- Vulnerable and marginal populations
- Populations exposed to agriculture intensification
Integration of Agriculture, Health and Nutrition

1 – Nutrition-Sensitive Value Chain
2 – Biofortification
3 – Control of Agriculture-Associated Diseases

Gender, Capacity, Institutions, Technologies, Environment

5- Policy and Decision Making
4 – Integrated Programs

Nutrition
Health
Agriculture

Maximize nutritional benefits
Minimize health risks

Behavior and Social Change
1. Nutrition-Sensitive Value Chain

Goal - Increase the demand for, and access to nutritious foods by identifying and using leverage points to improve nutrition through the value chain.

Impact Pathway – increased supply and intake of nutritious foods to be delivered in value chains (formal and informal markets) involving private producers, market agents and companies. Links to food commodity chain research.
2. Biofortification

**Goal**: Develop and release new varieties of carefully selected staple crops with enhanced bio-available nutrients to improve nutrition for millions of people

2 subcomponents:

- [HarvestPlus](#) (targeting Africa and Asia)
- [AgroSalud](#) (targeting Latin America)
3. Control of Agriculture-Associated Diseases

**Goal:** To control and mitigate agriculture-associated diseases in order to enhance environmental sustainability, reduce poverty, increase food security, and contribute to the health of poor communities.

**Sub Components:**
- Improving *food safety*
- Managing *water associated diseases* in agriculture
- Controlling *zoonotic diseases* and diseases emerging from animals
- Ensuring *occupational health* and minimizing drug resistance
Impact Pathway – Focusing on Risk Management

- Capacity strengthening of partners in risk analysis and associated methods
  - Risk ranking, Hazard identification
    - Description of systems, institutions and current disease/food safety situation
  - Risk assessment
    - Health Impact
    - Identification of risk factors & control points
    - Impact on poverty, gender, ecosystems
    - Identify options for risk management
  - Risk management
    - Availability, Affordability Acceptability for stakeholders
    - Technology development & assessment
  - Assess uptake of Risk mitigation interventions
    - Impact Evaluation
      - Randomized controlled trial, Stakeholder evaluation
    - Monitoring and evaluation

- Risk communication & development of decision tools to ↑ health & ↓ poverty
- Change in stakeholder knowledge, attitude and practice reducing risk
- Reduction of multiple burdens of health
4. Integrated Agriculture, Nutrition and Health Programs

**Goal**: Accelerate progress in improving health and nutrition by exploiting the synergies between agriculture, health and nutrition in development programs implemented at the community level.
Program Impact Pathway

Program design/implementation
Research

Outputs

Methods & tools
Better program models & capacity strengthened
Strong evidence

Outcomes

Methods & tools used, AHN programs implemented at scale; evidence used for decision making by program managers, practitioners, donors and policy makers

Impact

Improved nutrition and health
5. Informing Policy and Decision Making across Agriculture, Health and Nutrition

**Goal:** Synthesize and prioritize knowledge, evidence, and approaches to support better cross-sectoral policy and decision making and leverage synergies between agriculture, health and nutrition
Cross-cutting Issues

- **Gender**: focus on gender equity; women as participants, beneficiaries, key actors, enablers, target group; gender-disaggregated impact assessment
- **Capacity Strengthening**: at individual, institutional, policy level
- **Communication and Advocacy**: critical for establishing program (x-sectoral), consolidating support for its activities, recruiting new collaborators, ensure use of knowledge and global public goods
Strong Focus on Partnerships

- **Research Partners**: CGIAR, advance research institutes in developing and developed countries, academic institutions, private sector
- **Development implementers**: Governmental, and non-governmental institutions, UN agencies
- **“Enablers”**: policy and decision makers and investors (governments; intergovernmental agencies; development banks and development investors; public and private organizations), at international, regional, national levels.
What Value Will this program Add?

The program is in a unique position to make a difference to the lives of the rural poor because it will:

• Take a *systematic* view of how agriculture, health, and nutrition interact globally, nationally, and locally

• **Address gaps** in our knowledge of these relationships

• Develop a strong body of *evidence* based on rigorous research to help decision makers choose options and evaluate trade-offs

• Foster *effective approaches* and partnerships to improve nutrition and health that cross-sectoral boundaries
Revising the proposal and moving to implementation

1. Concept and program - refined in 2011 for start in 2012
   a. Better articulate conceptual framework and improve focus and alignment with others
   b. Strengthen logic between objectives, program description, activities and deliverables for investment and evaluation

2. Develop strategy, engage with partners and implement program over a 10-year time horizon from an initial 3 year plan
   1. Relative role of different partners
   2. Develop specific areas of the overall program with partners

All documents are available for review and comment at http://crp4.cgxchange.org/