

CGIAR Program on Agriculture for Nutrition and Health (A4NH) Major Planned Work in 2013

Theme 1 – Nutrition-sensitive value chains

This theme develops a new area of research focusing on addressing constraints to improving diet quality and safety through value chains for nutrient rich foods. The research in this area begins with understanding consumer knowledge, behavior and demand, and then develops technologies and products that increase access to nutrient rich foods; and finally identifies market or policy interventions that will increase consumption of nutrient rich foods. Much of the research in this area is initially focused on characterizing consumer diets and constraints to behavior change.

In 2013, there will be two new initiatives. Seed grants will support expanding research to develop nutrition innovations in value chains to move beyond characterization of constraints to testing innovations. These will involve new partnerships between CGIAR Centers and public and private value chain actors. Strategic collaborations with development banks will work to improve nutritional outcomes of their projects and programs.

Theme 2 – Biofortification

In 2013, two remaining biofortified varieties will be released (zinc rice for Bangladesh and zinc wheat for India) and nutritional efficacy studies will be completed for most of the biofortified crops in target countries in Africa and South Asia.

Emphasis in 2013 will be on assessing strategies for production and consumption of released varieties in eight target countries including collaborations with national and international breeding and seed systems, NGOs, food processors and public food distribution systems. With partners in Latin America, research will focus on delivering biofortified varieties to ensure adequate diets in target populations using a “food basket” approach, and incorporating biofortified varieties into processed foods. Efforts will continue to mainstream biofortification into CG and NARS crop breeding programs.

Theme 3 – Agriculture-associated diseases

In 2013, research under this theme will focus on three main areas: enhancing food safety of perishable products, developing and expanding research on market and health risks associated with mycotoxins, and better management of zoonoses and emerging infectious diseases.

In 2013, a situational analysis of the Rift Valley Fever in Kenya, an assessment of brucellosis control options in Africa and a proposal for the management of cysticercosis will be developed. A pathogen detection platform and bio repository will be established in Nairobi and several papers produced on zoonoses and emerging infectious disease emergence in Kenya. A summary of capacity building for One Health/Ecohealth as well as policy briefs for country actions will be produced for 6 countries of south-east Asia. On mycotoxins, risk mapping and assessment of risk mitigation technologies as well as an overview of strategic issues in mycotoxin control will be undertaken with the Maize and Grain Legume CRPs.

Theme 4 – Integrated Programs and Policies

A major focus of this theme is evaluation of how nutrition outcomes through integrated programs, particularly agricultural interventions, can be combined with gender empowerment, social protection and targeted direct nutrition interventions. The evaluation framework and current evidence will be synthesized in a major publication in 2013 and presented at a number of international meetings.

In 2013, a number of on-going evaluations will continue. Initial analysis of a trial of household food production and associated nutrition and health behavior changes will be completed in Burkina Faso. There is also expected expansion of programs for household food production and nutrition and health support with rigorous evaluation in additional countries in West Africa with Helen Keller International (HKI). Additionally, cross-sectoral policy research will be initiated with nutrition and health partners in India, Bangladesh, Kenya and Ethiopia.

Partnerships, Capacity Development and Communications

In 2012, a partnership strategy was developed focusing on supporting the three impact pathways – value chains, programs and policies. Resources will be invested in partnerships in 2013 for national and regional programs in Africa through CAADP, ReSAKKS and country SAKKS, collaborations with IFAD and WB, engagement with academic networks of northern and southern universities that do research in the agriculture-nutrition-health nexus, and expanded collaboration with program implementers.

In 2013, internal communications will be strengthened through development of reporting mechanisms for deliverables and external communication capacity will be built through web site management, newsletters and funding support for research paper production and publication. Capacity of research and staff will be assisted through attendance at several high-level international agriculture and nutrition themed conferences to showcase and share research results.

Major Developments in Gender Research

A4NH focuses on the CGIAR System Level Objective of improving nutrition and health. Gender is intimately linked to nutrition and health outcomes, as is explicitly recognized by the Consortium, which chose gender – nutrition as one of its four gender research focus areas.

The A4NH gender strategy was submitted and approved by the Consortium in November 2012. The strategy emphasizes incorporating gender research into its theory of change and three impact pathways. In the first half of 2013, major efforts will refine and better specify the A4NH theory of change and impact pathways for specific inclusion and integration of gender.

Across the A4NH research portfolio, there are three levels of research capacity:

Group 1 – projects collect gender disaggregated data and often consider gender- differentiated outputs. There is usually no explicit theory of change or gender research hypotheses being tested. Research in this group usually focuses on plant breeding for micronutrients or commodity development. In these projects, approximately 1% of the research budget would be allocated to gender research.

Group 2 – in addition to gender disaggregated data and outputs, projects have gender-specific hypotheses and consider gender-differentiated outcomes and impacts. Research in this group is largely working with specific target populations for agriculture-nutrition-health outcomes such as risk management of agriculture associated diseases and research into traditional food crops. Approximately 10% of the budget is estimated to be expended on gender research.

Group 3 – A4NH has a large group of projects in which cutting-edge gender research is integrated into the research. Most of this work focuses on integrated agriculture-nutrition programs. Gender is central to program design, delivery and evaluation. Much of the research is innovative and there is significant research capacity, particularly in the Poverty, Health and Nutrition Division of IFPRI. There are also substantive research collaborations because of the strong international reputation of this group. Because

of the integration of gender into the research we estimated that 50% of the budget of this research was attributable to gender for budgeting purposes.

In Table 2, the three groupings of budget research are linked to the research themes to provide budget estimates.

Our immediate priority is to strengthen research under group 1 and group 2, particularly around nutrition-sensitive value chains and delivery of biofortified crops and foods. We have estimated an additional investment of USD 500,000 for this gender research and capacity development.

Given that A4NH has significant capacity in gender-nutrition research we would support, with partners, the further development of the gender-nutrition research across the CGIAR. We would be willing to convene this with partners and estimate that for 2013, a budget of \$200,000 would be needed to discuss and develop this.

Table 1 - Details of planned outcomes and outputs and clusters of activities and budget per output for Theme 1: Value Chains

Level as described by OCS (see annex 1)	Description	Indicators of progress (actual or proxy)	Budget (\$ 000s)
Level 3: Theme	Theme 1: Value chains for enhanced nutrition and food safety	N/A	Budget per Theme \$5 Million (\$3.4M from W1/2)
	IDO 1: Target populations improve diet quality through increased consumption of nutritious foods	N/A	
	IDO 2: Target populations face reduced risk of food-borne disease		
Level 4 Objectives/ Outcomes	1.1 Data, evidence and tools to enhance consumer knowledge, awareness, and willingness to pay for safe, nutritious foods used broadly to create demand among target populations	(put the indicator that will be used for each objective, e.g. 'Number of countries in which agricultural and food security strategies that are adapted towards predicted conditions of climate change are promoted and communicated by the key development and funding agencies, civil society organizations and private sector') <ul style="list-style-type: none"> • Number of value chains for which evidence and tools are developed • Number of development actors using evidence and tools • Percent of target population that can be impacted by the evidence and tools 	\$3 million
	1.2 Models to enhance nutrition and food safety along the value chain are adapted and used for nutrient rich commodities, replication and scaling up	<ul style="list-style-type: none"> • Number of development actors adapting models • Number of nutrient rich commodities for which models are adapted • Percent of target population that can be impacted by these models 	\$1 million
	1.3 Nutrition and food safety are increasingly incorporated in value chain development	<ul style="list-style-type: none"> • Number of value chain research and development projects for nutrient rich commodities that incorporate nutrition. 	\$1 million

Level 5 Outputs	1.1.1 Information on access constraints for safe, nutritious foods among target populations	<ul style="list-style-type: none"> • Reports published from consumer and market surveys in at least three African countries and in Bangladesh and India • Value chains characterized for at least three nutrient rich foods in African countries and in Bangladesh and India 	N/A
	1.1.2 New tools developed and tested to measure and enhance consumer awareness, knowledge and willingness to pay for nutritious foods	<ul style="list-style-type: none"> • Market interventions tested in at least two African countries and in India • Methods for nutritional assessment of at least three nutrient rich food species developed and tested 	N/A
	1.2.1 New models developed and tested to identify entry points for nutrition interventions along the value chain for select systems and commodities	<ul style="list-style-type: none"> • New processing methods to enhance nutrition in at least two foods tested in at least two African countries • New production technologies to enhance nutritional availability tested for fruit in two African countries 	N/A
	1.3.1 Evidence on cost effectiveness and impact of new models to improve nutrition and food safety along the value chain	<ul style="list-style-type: none"> • Evidence regarding nutritional impact of interventions in value chains for at least three nutrient rich foods is disseminated to policy makers in at least three African countries and in Bangladesh and India 	N/A

Table 1 (cont) - Details of planned outcomes and outputs and clusters of activities and budget per output for Theme 2: Biofortification

Level as described by OCS (see annex 1)	Description	Indicators of progress (actual or proxy)	Budget (\$ 000s)
Level 3: Theme	Theme 2: Biofortification	N/A	Budget per theme \$35 Million (\$10.4 M from W1/2)
	IDO 1: Target populations improve diet quality through increased consumption of nutritious foods	N/A	\$28 million
	IDO 1: Target populations improve diet quality through increased consumption of nutritious foods	N/A	\$7 million
Level 4 Objectives/ Outcomes	2.1 High-yielding micronutrient enhanced varieties made available to NARES and implementing partners in target countries	<ul style="list-style-type: none"> • Number of breeding programs engaged in biofortification in target countries • Number of improved lines of biofortified parents introduced in product pipeline • Number of biofortified varieties released in target countries 	\$25 million
	2.2 Nutrition and health communities promote biofortified crops of demonstrated nutritional efficacy	<ul style="list-style-type: none"> • Number of target countries in which nutritional efficacy evidence is available and used by health and nutrition decision makers to promote consumption through gender-equitable policies, investments and education 	\$3 million
	2.3 Delivery programs establish progress in which farmers adopt and consumers eat biofortified varieties in target countries	<ul style="list-style-type: none"> • Number of farm households planting biofortified varieties in target countries • Number and nature of delivery partnerships in the public and private sector • Adoption rate of biofortified varieties in areas where they are promoted 	\$7 million
Level 5 Outputs	2.1.1 High-yielding micronutrient enhanced varieties	<ul style="list-style-type: none"> • Planned high-yielding varieties released <ul style="list-style-type: none"> - Zinc rice for Bangladesh - Zinc wheat for India 	N/A

<p>2.1.2 New high-throughput, low-cost methods developed and tested to measure vitamins and minerals in staple crops as harvested and in foods as eaten</p>	<ul style="list-style-type: none"> • Development and verification of methods • Verification of “next generation” DNA analysis in cassava breeding at IITA • Methods established and capacity developed in target countries: <ul style="list-style-type: none"> - Training on use of iCheck for field staff in Nigeria and DRC - Training on use of NIRS equipment in DRC - XRF equipment installed and staff trained in DRC, India, and Pakistan 	<p>N/A</p>
<p>2.2.1 Evidence on nutritional efficacy and bioavailability</p>	<ul style="list-style-type: none"> • Nutritional efficacy studies completed and published for: <ul style="list-style-type: none"> - High iron pearl millet in India and Benin - Zinc wheat in India (trial only; to be published in 2014) - Provitamin A cassava in Nigeria (trial only; to be published in 2014) - Provitamin A maize in Zambia (trial completed; preliminary results available) - High iron beans in Rwanda (trial only; to be published in 2014) 	<p>N/A</p>
<p>2.3.1 Consumer acceptance and pilot dissemination studies on methods and messages to promote adoption by farmers and consumption of biofortified varieties</p>	<ul style="list-style-type: none"> • Adoption and consumption rates in pilot study sites in target countries • Incorporation of biofortified varieties in distribution systems for seeds / planting materials • Consumer acceptance research completed for high iron beans, provitamin A cassava, high iron pearl millet, and provitamin A maize • Farmer feedback studies - measuring adoption and diffusion - completed for high iron beans (Rwanda) and high iron pearl millet (India) • Planning for pilot studies completed for high iron bean (Guatemala, Rwanda) and provitamin A cassava (Nigeria) 	<p>N/A</p>
<p>2.3.2 Inclusion of biofortified crops in food products and food distribution systems</p>	<ul style="list-style-type: none"> • Documented adoption of biofortified varieties by food processors (millers) • Documentation and adoption of biofortified varieties in food distribution systems • Food products developed that incorporate biofortified 	<p>N/A</p>

		<p>varieties</p> <ul style="list-style-type: none">• Value chain studies completed for high iron beans (Rwanda), orange sweet potato and high iron beans (Uganda), and provitamin A cassava (Nigeria)• Seed systems studies completed for provitamin A maize (Zambia) and high iron pearl millet (India)	
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Table 1 (cont) - Details of planned outcomes and outputs and clusters of activities and budget per output for Theme 3: Agriculture-Associated Diseases

Level)	Description	Indicators of progress (actual or proxy)	Budget ('000)
Level 3: Theme	Theme 3: Control of Agriculture-Associated Diseases (AAD)	N/A	Budget per theme \$9 Million (\$4.4M from W1/2)
	IDO 2: Target populations face reduced risk of food-borne disease		
	IDO 3: Target populations face reduced risk of agriculture-associated infectious disease		
Level 4 Objectives/ Outcomes	3.1 Systems understanding and prioritisation being used to inform policies, programs and research for AAD	<ul style="list-style-type: none"> Number of key policy, program and research/academic actors using systems understanding and prioritisation of value chain/agroecosystem assessments 	\$4 million
	3.2 Epidemiology and socio-economics inform prevention and control of AAD in effective, equitable and sustainable ways (including risk and socio-economic assessment)	<ul style="list-style-type: none"> Number of key policymaker and academics actors using research outputs on AAD epidemiology risk and socioeconomics, including gender-disaggregated data where appropriate 	\$4 million
	3.3 Stakeholders aware of evidence on innovation and risk based and ag-based management for priority AAD	<ul style="list-style-type: none"> Number of policymakers and implementers, including value chain actors, using research outputs on innovation, risk and ag-based management for priority AAD 	\$1 million

Level 5 Outputs	3.1.1	Mapping and rapid prioritisation (including both methods and delivery), of priority AAD problems per systems context (such as value chain analysis, risk maps, current control strategies for mycotoxins, key food-borne diseases and zoonoses)	<ul style="list-style-type: none"> • Tools, methods, and approaches to describe the societal burden of AAD <ul style="list-style-type: none"> - Situational analysis for Rift Valley Fever in Kenya • Systems context prioritization of AAD <ul style="list-style-type: none"> - Overview of brucellosis in Africa and recommendations for decision makers - Food safety assessments and research priorities in the CRP 3.7 value chains 	N/A
	3.2.1	New diagnostic, detection, and surveillance technologies and methods for initial high priority AAD	<ul style="list-style-type: none"> • Frameworks to conduct integrated (health and socioeconomic) assessments of AAD <ul style="list-style-type: none"> - Toolbox for integrated nutrition and food safety assessments • Technologies and methods to understand AAD, including detection platforms and mathematical models <ul style="list-style-type: none"> - Pathogen detection platform and biorepository • Understanding of disease dynamics, risk factors, transmission and drivers <ul style="list-style-type: none"> - Peer-reviewed papers (2-3) on zoonoses/emerging infectious diseases epidemiology in Kenya 	N/A
	3.2.2	Understanding epidemiology of priority AAD, including comprehensive and integrated health risk and socioeconomic assessments, in order to identify critical control points and control options		N/A
3.3.1	Risk management innovations and delivery strategies and testing of efficacy, feasibility, and sustainability	<ul style="list-style-type: none"> • Refining and testing of risk management strategies for key AAD <ul style="list-style-type: none"> - Next iteration of decision support tool for Rift Valley Fever - Major proposal for management of cysticercosis • Promoting future risk management strategies of AAD by generating evidence and building coalitions <ul style="list-style-type: none"> - Guidelines and trainings on how to use risk assessment for food safety management in informal and formal markets in Vietnam • Capacity building using a OneHealth/Ecohealth approach to augment prevention and control of priority AAD <ul style="list-style-type: none"> - Lessons learned from Ecohealth support in SE Asia 	N/A	
3.3.2	One Health/Ecohealth collaborations for integrated, multi-disciplinary management of initial, high priority zoonoses and food-borne diseases		N/A	

Table 1 (cont)¹ - Details of planned outcomes and outputs and clusters of activities and budget per output for Theme 4: Integrated Programs and Policies

Level as described by OCS (see annex 1)	Description	Indicators of progress (actual or proxy)	Budget (\$ 000s)
Level 3: Theme	<i>Theme 4: Integrated Agriculture, Nutrition and Health Programs and Policies</i>	N/A	Budget per theme \$16 Million (\$1.2M from W1/2)
	IDO 4: Synergies between agriculture, nutrition and health sector goals are recognized and exploited in the design of policies and investments	N/A	
Level 4 Objectives/ Outcomes	4.1.1 Methods & tools used to implement ANH programs at scale	<ul style="list-style-type: none"> • Number of actors using methods and tools developed by A4NH to implement programs at scale • Number of actors using impact and cost-effectiveness evidence to inform ANH decisions 	\$14 million
	4.1.2 Evidence of impact and cost-effectiveness of ANH programs used for decision making by program managers, practitioners, donors		
	4.2.1 Information systems, evidence and good practices on ANH integration used for decision making by policy makers and donors	<ul style="list-style-type: none"> • Number of actors using systems, evidence and documented good practices to integrate ANH in their work. • Number of ANH policies initiated in a collaborative process. 	\$2 million
4.2.2 Collaborative ANH policy making undertaken			

¹ Table 1 uses the levels described in the OCS structure hierarchy, with some additions -see annex 1- to present the planned research in the forthcoming year

<p>Level 5 Outputs</p>	<p>4.1.1.1 Methods & tools to design, implement, evaluate, scale-up ANH programs</p> <p>4.1.2.1 Better, more cost-effective integrated ANH program models & capacity strengthened at all levels</p> <p>4.1.2.2 Strong evidence of role of integrated ANH programs in improving health and nutrition</p>	<ul style="list-style-type: none"> • Tools designed and used to implement agriculture, nutrition and health program implementers <ul style="list-style-type: none"> - Zambia process evaluation report - Report on program tools - Academic paper on women and cash transfer Pakistan - Feasibility of nutrition BCC in media report - Operations research for Burundi and Guatemala • Rigorous evaluation studies of nutritional outcomes by programs <ul style="list-style-type: none"> - Two papers submitted per program (effects on health and production; sustainability and spillover) - Program and intervention mapping report - Two program and intervention mapping reports - Data collection questionnaire, process evaluation and feasibility reports - Operations research for Burundi and Guatemala - Paper about fortification status of staple foods - Paper on secondary analysis of vitamin A fortified vegetable oil - Journal article on analysis of role of maternal and household resources and associations with under-nutrition 	
	<p>4.2.1.1 Information system & communities of practice formed, data mapped, joint metrics developed</p> <p>4.2.1.2 Good practices in ANH integration recognized and applied; cross-sector work incentivized</p> <p>4.2.2.1 Capacity for policy research and influence assessed and strengthened.</p>	<ul style="list-style-type: none"> • Capacity building to improve KAP of key agriculture policy makers on ANH <ul style="list-style-type: none"> - Papers on agriculture and other sectors' importance of child nutrition - Stakeholder mapping report - Report on relationship between income, agriculture production, diet and nutrition status in Bangladesh/Pakistan • Capacity building to improve KAP of key multi-sector policy makers on ANH <ul style="list-style-type: none"> - Regional capacity building workshop for USAID staff - Anemia strategy paper completed/ presented at 	<p>N/A</p>

		<ul style="list-style-type: none"> - capacity building Anemia PAG in Kampala - Annual progress report of knowledge mobilization partners and activities - Field assessment reports of inter-sectoral convergence in two states and of workshop to share results - Policy note on cross-sectoral planning and action for India and studies on cross-sectoral actions at the state level - Operations research for Burundi and Guatemala - Journal article on supply-side and demand- side constraints on use of health and nutrition services in Bhojpur district in Bihar in India - Analysis of Kenyan System – scaling up nutrition intervention for crisis situations - Enabling environment reports - India Paper 2 final: Review of nutrition institutional capacity and content analysis of curricula 	
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Table 2 - CRP's budget earmarked for gender research

Item	USD (thousands)
I - Part of the CRP's Themes budget earmarked for integrating gender research into the Theme's research	
1 Theme 1 – Value chains for enhanced nutrition	430.5
2 Theme 2 – Biofortification	399
3 Theme 3 Agriculture-associated diseases	829.5
4 Theme 4 Integrated Programs and Policies	5250
Sub-Total in Themes	6,909
II - Budget for gender research cutting across the CRP's Themes	
1.Strategic gender research – Theme 4 Integrated programs and policies integrates research results from other Themes and	
2.Capacity strengthening on gender analysis competencies	500
Sub-Total	500
III Budget for implementing gender research across the CRPs, as per recommendations of Gender Network	
Partnership of IFPRI with two other partners*	200
Sub-Total	200
Grand Total	7,609

*The partnership is expected to include A4NH with one other CGIAR Center and a university partner.