

LINKING AGRICULTURE TO NUTRITION IN AFRICA: THE ROLE OF BEANS

**Mercy Lung'aho^a, Rodah Zulu^β,
and Robin Buruchara^a**

International Center for Tropical Agriculture (CIAT): ^βMalawi, ^aNairobi.
International Center for Tropical Agriculture (CIAT)
Regional Office for Africa
PO Box 823-00621, Nairobi, Kenya

MERCY LUNG' AHO holds a Doctorate degree in Food Science and Human Nutrition from Cornell University (USA). She is a research scientist at the International Center for Tropical Agriculture (CIAT) based in Nairobi. Her expertise is in nutrition-sensitive agricultural programming. Her research includes a landmark study on iron biofortified beans. She advocates for more attention to nutrition in the field of agriculture. Mercy is a 2017 Aspen Institute New Voices Fellow.



ABSTRACT

Despite the clear potential for improvements in agriculture to enhance maternal and child nutrition outcomes the evidence for this is scarce. Recent reviews on agricultural interventions for improving nutrition reveal that more and better-designed research is needed to generate evidence of impact and information on what kinds of agricultural investments will have positive benefits for nutrition and health.

CIAT responds to this challenge by generating research that creates a shared understanding of the nexus between agriculture, food systems, nutrition, and resilience; generating evidence on what works, when, and how in linking agriculture interventions to nutrition outcomes and high quality diets; and catalyzing policy dialogue advocating for better diets.

CIAT has led biofortification efforts, through supporting breeding for enhanced iron and zinc in beans. There is documented evidence by HarvestPlus in Rwanda that eating beans biofortified with iron can reduce iron deficiency in women of reproductive age. CIAT continues to promote utilization of biofortified bean varieties while also promoting food diversification using the food basket approach. In Malawi for example, CIAT promotes nutrition education and behaviour change communication to influence caregivers' preferences towards more nutrient-rich foods, better intra-household allocation of food to benefit vulnerable groups, and other nutrition practices related to child feeding, caregiving, sanitation and hygiene.

Moreover, policymakers urgently need to recognize that poor diets are compromising economic productivity and well-being. Agricultural programs and investments are needed to support an enabling policy environment to contribute to improved nutrition. CIAT strives to lead the policy dialogue in its focal countries such as Madagascar towards national policies, action plans, and development activities that explicitly support nutrition through a multi-sectoral approach.

CIAT also focuses on promoting increased, responsible private sector engagement in targeted communities; encouraging processing and consumption of nutritious and safe foods; and harnessing the expertise of the private sector to shape healthy consumption patterns in its focal countries for example Kenya.

The results we seek in Africa are aimed at ensuring that consumers have better access to more nutritious food; that there are improved national systems to plan, manage, and evaluate nutrition-sensitive agricultural programs; and that we generate evidence of the links between agricultural interventions and improved nutrition.

KEYWORDS

Agriculture, nutrition, biofortification, policy, private-sector

REFERENCES

Laura E Murray-Kolb, Michael J Wenger, Samuel P Scott, Stephanie E Rhoten, Mercy G Lung'aho, and Jere D Haas. Consumption of Iron-Biofortified Beans Positively Affects Cognitive Performance in 18- to 27-Year-Old Rwandan Female College Students in an 18-Week Randomized Controlled Efficacy Trial. *J. Nutr.* jn255356; first published online September 27, 2017. doi:10.3945/jn.117.255356

Jere D Haas, Sarah V Luna, Mercy G Lung'aho, Michael J Wenger, Laura E Murray-Kolb, Stephen Beebe, Jean-Bosco Gahutu, and Ines M Egli. Consuming Iron Biofortified Beans Increases Iron Status in Rwandan Women after 128 Days in a Randomized Controlled Feeding Trial. *J. Nutr.* jn224741; first published online June 29, 2016. doi:10.3945/jn.115.224741

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CIAT 50
1967-2017

JIRCAS International Symposium
Promoting an Active Role for Female Researchers in Agriculture, Food, and Nutrition Research
November 2, 2017
Tokyo, Japan

Mercy Lungaho^a, Rodah Zulu^b, and Robin Buruchara^a
International Center for Tropical Agriculture (CIAT):
^aMalawi, ^bNairobi.



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Who we are: About us

The International Center for Tropical Agriculture (CIAT)

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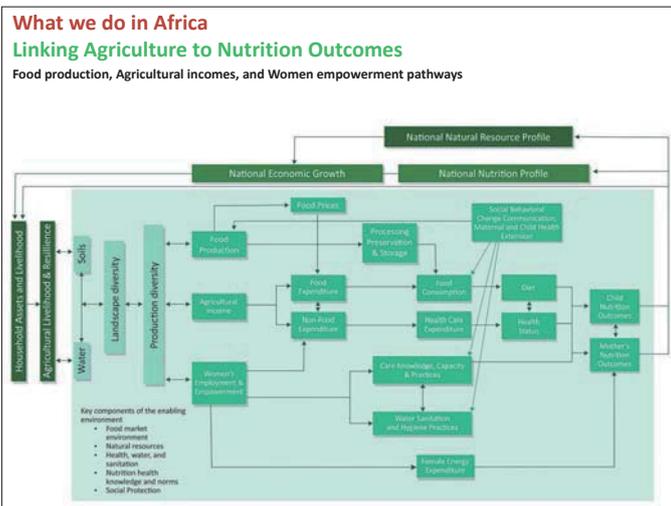
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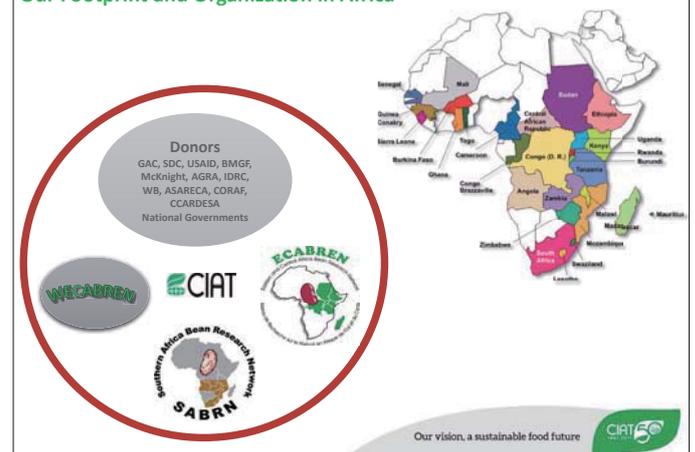
Our vision, a sustainable food future

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Where we work in Africa: PABRA Partnerships

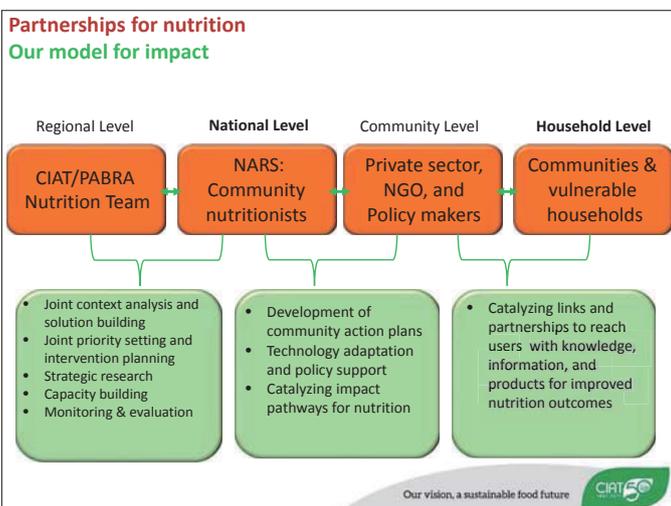
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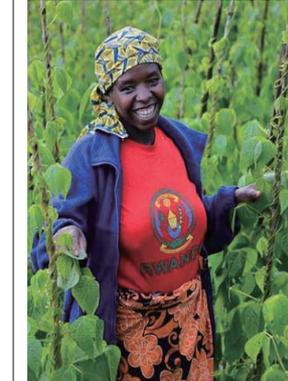
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How CIAT impacts communities and households in Africa

Generating evidence of what works – Rwanda



Rwanda: Beans to the rescue
Climbing beans; Biofortified beans
Evidence

Summary
Problem: Anemia among women of reproductive age
Intervention: Biofortified beans – Efficacy study
Outcome: Improved iron status and improved brain function
Impact: Biofortification as a strategy incorporated into national agriculture/nutrition action plans

Partnerships:
NARS: Rwanda Agricultural Board
Private sector: Health Development Initiative
Research and Policy support: CIAT/ PABRA; HarvestPlus

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How CIAT impacts communities and households in Africa

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The Journal of Nutrition
Community and International Nutrition

Consuming Iron Biofortified Beans Increases Iron Status in Rwandan Women after 128 Days in a Randomized Controlled Feeding Trial¹⁻³

Jero D Haas,^{4*} Sarah V Lusa,⁵ Mercy G Lang'aho,⁶ Michael J Winger,⁷ Laura E Murray-Kelb,⁸ Stephen Rebebe,⁹ Jean-Benoit Gakuzzi,⁹ and Ines M Egli¹⁰

¹Division of Nutritional Sciences, Cornell University, Ithaca, NY; ²ManoAfrica, International Center for Tropical Agriculture (CIAT), Kinshasa, Rwanda; ³Department of Psychology and Culture and Behavioral Neuroscience, The University of Oklahoma, Norman, OK; ⁴Department of Nutritional Sciences, The Pennsylvania State University, University Park, PA; ⁵Beane Program, CIAT, Cali, Colombia; ⁶School of Medicine and Pharmacy, College of Medicine and Health Sciences, University of Rwanda, Kigali, Rwanda; and ⁷Division of Food, Nutrition, and Health, Swiss Federal Institute of Technology (ETH), Zurich, Switzerland

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Community and International Nutrition

Consumption of Iron-Biofortified Beans Positively Affects Cognitive Performance in 18- to 27-Year-Old Rwandan Female College Students in an 18-Week Randomized Controlled Efficacy Trial

Laura E Murray-Kelb,¹ Michael J Winger,^{2,3} Samuel F Scott,⁴ Stephanie E Rhoads,⁵ Mercy G Lang'aho,⁶ and Jero D Haas⁷

¹Department of Nutritional Sciences, The Pennsylvania State University, University Park, PA; ²Department of Psychology and Culture and Behavioral Neuroscience, University of Oklahoma, Norman, OK; ³Division of Nutritional Sciences, Cornell University, Ithaca, NY; and ⁴ManoAfrica, CIAT, Kinshasa, Rwanda

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How CIAT impacts communities and households in Africa

Influencing nutrition policy in Madagascar



Madagascar: Beans to the rescue School feeding program Policy

<http://scalingupnutrition.org/news/ministries-work-together-in-madagascar-to-revive-their-school-feeding-programme/>

Summary
Problem: Malnutrition due to monotonous diets based on rice
Intervention: Fortified composite bean-based porridge introduced in 2 school feeding programs in Antananarivo
Outcome: Increased school attendance and weight gain in vulnerable children
Impact: In 2015 Madagascar passed a policy to revive their national school feeding programme that had been abandoned since 2009
Partnerships:
NARS: FOFIFA and ONN
Private sector: PROFIT S.A.R.L
Research and Policy support: CIAT/ PABRA

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How CIAT impacts communities and households in Africa

Nutrition advocacy among vulnerable communities in Malawi



Malawi: NUA 45 beans to the rescue Community nutrition program Nutrition advocacy and education

Summary
Problem: Hunger and malnutrition among resource poor farming households
Intervention: Introduced biofortified bean varieties in 4 communities in Kasungu (North) and Mzimba (South)
Outcome: Food security, production of diverse foods, consumption of diverse foods and increased income from sale of surplus biofortified beans
Partnerships:
NARS: DARS
NGOs: Catholic Relief Services (CRS) and Mzuzu CADECOM
Research and Policy support: CIAT/ PABRA

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CGIAR
A CGIAR Research Center

Headquarters
Km 17 Recta Cali-Palmira C.P. 763537
P.O. Box 6713, Cali, Colombia
Phone +57 2 445 0000

ciat@cgiar.org
www.ciat.cgiar.org

ciat.specific@ciat.org
@ciat.cgiar
@CIAT

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