

Cultivating knowledge: Agriculture across the disciplines

Presented in collaboration with the
USask Agriculture Signature Area of Research



SIGNATURE AREA
AGRICULTURE

Agriculture and Gender

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October 2, 2024



Canada

20 Years

Project Milestone



1997

BEGINNING OF THE JOURNEY

Agricultural Colleges at HU and U of S started implementing low-input sustainable agriculture in the south central Rift Valley of

2003

IMPROVED PRACTICES

Improved land-management practices increased crop production and reversed land degradation.

2007

CAPACITY BUILDING IN AGRICULTURE

HU developed graduate curricula; 8 MSc programs in agriculture launched and 42 graduates in MSc.

2009

SUPPORT TO NUTRITION PROGRAM

U of S nutrition faculty members joined the collaboration and started delivering courses in clinical and community nutrition.

2010

DEVELOPED PHD CURRICULA

With financial support from the DFID, UK (DelPHE program), 8 PhD Programs developed and launched.

2013

IMPROVING FOOD & NUTRITION SECURITY

Baseline data collected; Pulses introduced to address food insecurity through Faculty and graduate students' researches. Establishment of Academic Center of Excellence in Nutrition at HU.

2014

PRE-SCALING UP OF TECHNOLOGIES

High yielding chickpea varieties with improved agronomic and soil management practices introduced to six districts in SNNPR.

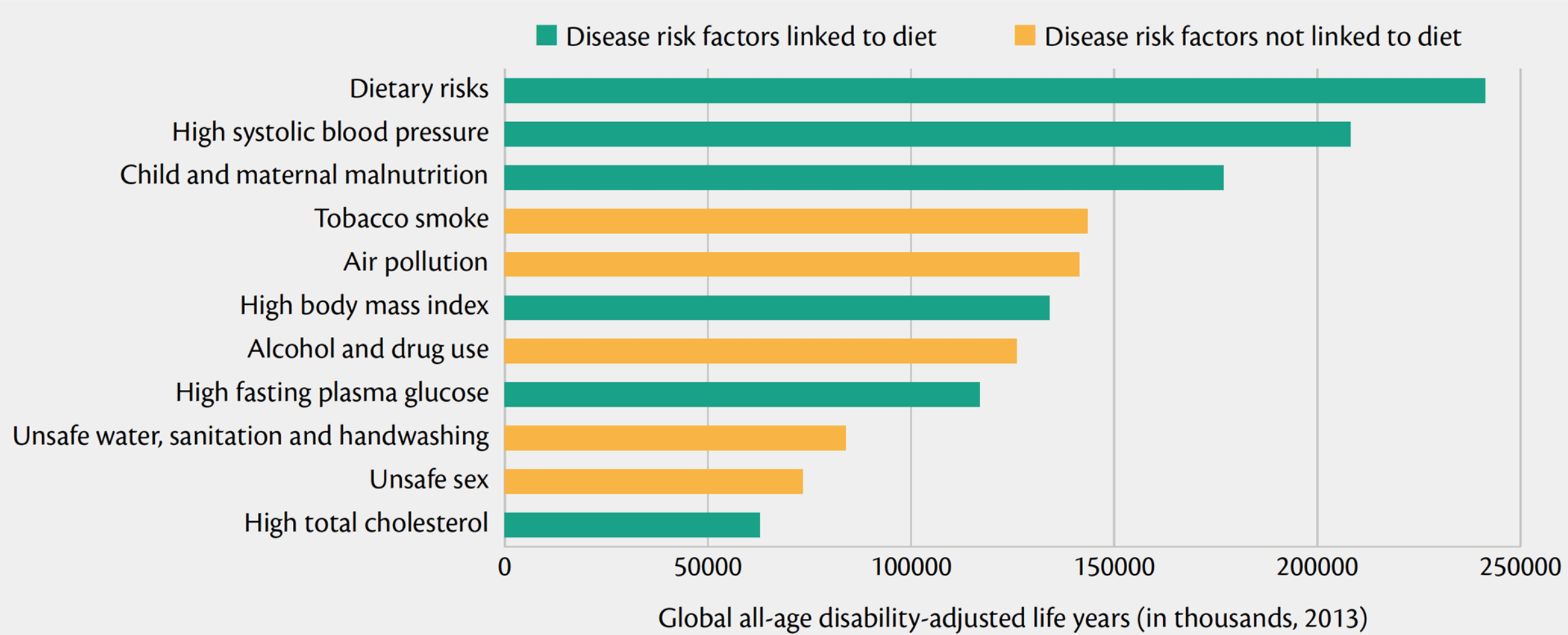
2018

SCALING-UP PULSE INNOVATIONS

51,068 farm household directly reached with sustainable pulse production and associated seed production and delivery systems; 23,059 women farmers directly reached with Nutrition Education, pulse-based foods integrated into daily dietary habits.



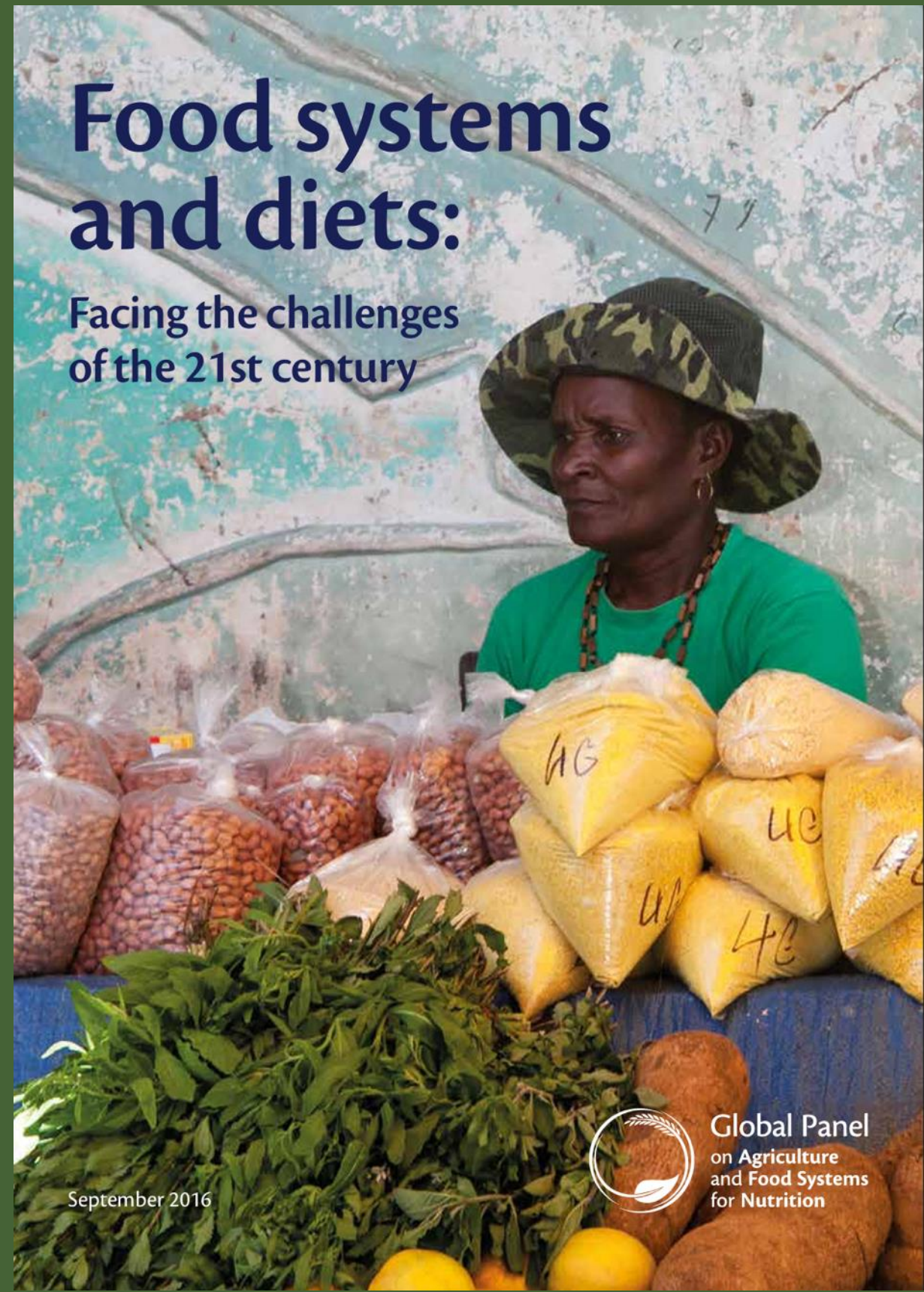
TOP RISK FACTORS DRIVING THE GLOBAL BURDEN OF DISEASE (DALYs)



Jointly funded by



BILL & MELINDA GATES foundation



September 2016



Source: Global Panel 2016

There are many ways to support nutrition ...



Agriculture and food systems

Social protection

Women's empowerment

WASH

Education

**Our Research Program: Promoting pulse crops,
particularly chickpeas and haricot beans, to enhance
food security, nutrition, and livelihoods among farming
households in Ethiopia**

Objectives

Key Objectives:

- To enable large-scale positive change in food and nutritional security in southern Ethiopia for ~70,000 farm households.
- To build sustainable (self-propagating) systems that would be managed locally and provide novel economic activity and employment
- To improve women farmers' access and control over resources to enhance their participation, productivity, income and nutritional status
- To develop a sustainable supply chain with partners, integrating agriculture and nutrition

ADAPTED Nutrition-Sensitive Strategies

Agriculture strategy:

- Promoted good farming practices
- Introduced new production technologies

Adapted strategy:

- Build capacity of cooperative and other farmer groups in appropriate
 - Storage practices for pulses varieties (chickpea, beans)
 - Markets and distribution channels
 - Provision of safe, wholesome, nutritious foods
- Capacity building and training

The protein supply chain



Processing the product

Building a market

Sales and Distribution

Scaling up the acreage

Partnerships

Nutritionists and product development

Sales Representatives

Factors for yield

Need high quality seed supply

Develop agronomy

Root inoculants, *Rhizobia*

Define suitable protein source

Break crop. Soil preparation. Seeding

Short season legume



Why Pulse (chickpeas, beans)?



- High protein, high fibre
- Nitrogen fixation
- Short season crop
- Fits in rotations with Teff, Corn, Soya
- Popular during fasting days (180 per year)
- Climate resilience:
Pulses can access nutrients and soil moisture at deeper levels. More effective than some other crops, especially after irrigated crops.
- Crucial for climate change adaptation and soil health in SSA agriculture

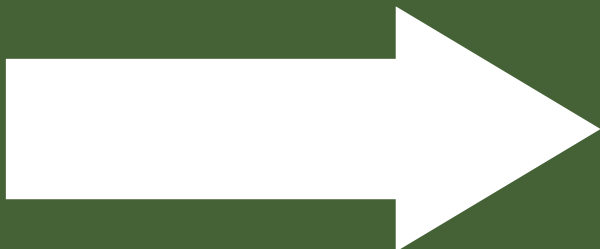
Traditional Food Practices: Grain is a mainstay of the Ethiopian and many other cuisines in Sub Saharan Africa



Teff – a national staple



Injera



Examples of Nutrition-Sensitive Strategies

Processing the Product: Key Partners: GUTS Agro Industry

Processing
the product



Building
a market



Sales and
distribution



GUTS AGRO INDUSTRY PLC
ጋትስ አግሮ ኢንዱስትሪ ኅ/የተ/የግ/ማ
ISO 22000-2005 Certified

ጤናማ ምግብ ለሁሉም!
Nutrition for all!

The image shows the GUTS AGRO INDUSTRY PLC logo at the top, followed by the company name in English and Amharic, and its ISO 22000-2005 certification. Below this, there are images of various product packages including 'Ltbdel' and 'Lembo Snack'. At the bottom, there is a slogan in Amharic and English: 'ጤናማ ምግብ ለሁሉም! Nutrition for all!'.



Building A Market Through New Products

Processing
the product



Building
a market



Sales and
distribution

Chickpea porridge



Extruded chickpea snack



Convenience chickpea Shiro



Women participating Sales and Distributions

Processing
the product



Building
a market



Sales and
distribution



Stories of Change

I am the beneficiary of this project and a mother of five. I was given improved variety of seeds at a small scale to try it and results were admirable high...The previous year was a tough year for us, nature was against. It assisted my household to cope with such difficult times.

- Female farmer from Boricha district in the Sidama Region of Ethiopia (2016)



This is an AI-generated image of a woman farmer from the Sidama region of Ethiopia, standing proudly in her lush green crop field.

Outcomes & Lessons Learned for Gender Equality

- This multidisciplinary, multisectoral collaborative program demonstrates how pulses, especially chickpeas and haricot beans, can positively impact women's lives, contribute to food security, and foster sustainable livelihoods in Ethiopia
- Many benefits gained from including the voices of those historically excluded from participating in agricultural technology innovations.
- Greater participation improves food security and nutrition, reduces poverty, and promotes gender equality
- Partnerships and collaborations are essential. The USASK –Hawassa University partnership is strong, with secure funding from Global Affairs Canada, IDRC, and others.
- Inclusive policy frameworks that supported gender equality and access to resources for marginalized groups in agriculture.

What's Next for Gender Equality?

- Research: focus on “what works”, especially for women and youth (males & female); recognizing the importance of context and demographics; “No one size fits all.”
- **Innovations focused on removing barriers, particularly those that hinder access to social networks, technology, and resources, with particular attention to women's needs**
- Capacity building and skills development, investing in training programs and livelihood opportunities, particularly for women, to foster economic gains



Credits

University of Saskatchewan

- Dr. Carol Henry
- Dr. Bruce Coulman
- Dr. Bob Tyler
- Dr. Gord Zello
- Dr. Susan Whiting
- Dr. Patience Elabor-Idemudia

Hawassa University

- Dr. Sheleme Beyene
- Mrs. Addisalem Mesfin
- Dr. Walelign Worku
- Dr. Tewodros Tefer
- Dr. Kebede Abegaz
- Drs. Berhanu Abate



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Canada



THANK YOU