Building a Partnership to promote legume research: A case of Pulse Innovation in southern Ethiopia

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Sustainable Grain Legume Systems for Food, Income and Nutritional Security in a Rapidly Changing Climate
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Introduction

The activities on Pulse Production and Nutrition started in 2010.

It is part of the long time (1997 to date) collaboration between HU and UoS.

• Six successful projects
  • Curriculum Development
  • Graduate training (109 MSc and 12 PhD)
  • Research
  • Pre-scaling up of best research results

The “Scaling –up Pulse Innovation for Food and Nutrition Security in southern Ethiopia” project was initiated:

• to catalyze large-scale positive change in food and nutrition security in southern Ethiopia by scaling up pulse-crop innovations to reach 70,000 farm households.
Intervention Components

- Soil Productivity
- Varieties -seeds
- Improved practices
- Biofortification

- Market
- Value chain
- Seed system

- Division of labor
- Decision making
- Resource access and control

- Bioavailability
- Preparation
- Processing
- Diet diversity

- Pulse productivity
- Pulse for income

- Pulse nutrition for health
- Gender and social dimension

- Diet diversity
IMPACT PATHWAY

Identify Target Areas/Population
Setting Targets
Assessments

Discovery

Varietal testing/Soils/Agronomy
Socio-economic/Gender
Nutrient/Processing/Acceptability
Bioavailability and Efficacy Studies

Development

Seed Production and Distribution System
Education, Promotion and Consumer Acceptance

Dissemination

Improved income and diet for target population
Research components:

- Soil management
- Pulse Agronomy & PVS
- Post-harvest & Household Processing and Nutrition Education
- Socio-economics & Gender
- Food and nutrition security

Chickpea, Common bean, snap bean, faba bean, lentil,
Research Sites
Outputs

Production → Processing → Nutrition

- Supply of P, Zn and Fe
- Best performing varieties (seed)
- Rhizobium – best compatible strain

Packages of Practices and Seed
- Agronomic practices
- Cropping sequences

Nutritious Pulse-based Food Products
- Processing methods and Recipes
- Pulse based complementary food
- Nutrition education package

Socioeconomic and gender (Approaches, Training models)
Evidence from the field

“chickpea pea enables me to use my limited land efficiently- double crop harvest”

Rukiya Esssa-women farmer from wachoebiso kebele- Hulbareg District 4/01/14

A female farmer harvesting chickpea for the first time at Halaba
• Processed products showed significant reduction of phytate \( (p=0.001) \)
• Reduced cooking time

- Significant change in:
  - **KAP** of mothers related to pulse-incorporated complementary feeding practices and
  - Mean **weight gain** of young children.
Strategies for Scaling-up

Packages of Practices and Seed

Policy
Model
Service
Product

Ideas
Prototype
Market ready
Scaling up
Strategies for Scaling-up (Cont’d)

Nutritious Pulse-based Complementary Foods

- Policy
- Model
- Service
- Product
- Ideas
- Prototype
- Market ready
- Scaling up
Strategies for.. *(Cont’d)*

**Project Partners**

- Bureau of Agriculture & Natural Resource  
  Public
- Bureau of Health  
  Public
- Farm Radio International  
  NGO
- Guts Agro Industry  
  Private
- South Agricultural Research Institute  
  Public
- Ethiopia Public Health Institute  
  Public
- South Farmers Cooperatives Federation  
  Private
- Menagesha Biotech  
  Private
- ICRISAT  
  CG Center
- South Seed Enterprise  
  Public
- Bureau of Women and Children  
  Public
- Bureau of Marketing and Cooperatives  
  Public
Improved production, Nutrition and Income for >70,000 HH

Agronomic packages and seeds

Input supply, seed purchase, union formation
- SSE
- Menagesha Biotech
- SFCoF
- BoANR

Dissemination, Research, Training, Feeding programs
- BoANR
- BoH
- Faculty
- Researchers
- Grad students

Nutritious Pulse-based Complementary Foods

Product development, Communication, Policy
- Guts Agro
- ICRISAT
- EPHI
- Postdocs
- FRI
Scaling-up Pulse Innovations

• A total 330 farmers in 66 clusters for common bean and 345 farmers in 69 clusters for chickpea seed productions in 9 districts in 2015;

• Additionally, 1500 farmers (1266 male 234 female) produced improved varieties of bean using 2 kg on 200 m\(^2\) plot each; and

• 8980 farmers (4951 male 4029 female) produced improved varieties of chickpea using 2 kg on 200 m\(^2\) plot each;

• Farm Radio International targeted 135,000 households.
Key messages

- Multi-stakeholder platform is essential for scaling-up innovations;
- Selection of the right partners and sharing responsibilities for the common goal;
- Application of the appropriate business model;
- Research to validate performances at new sites, acceptance of the products, gender and other socioeconomic issues;
- Training for Development Agents and Health Extensions workers as well as farmers.
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Partners,

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