

MULTI-FUNDER INITIATIVE

Canadian International Food Security Research Fund (CIFSrf)

Soil-building crops key to improving health and incomes

Combining practical agriculture and business practices with highly nutritious, yet underutilized chickpeas and other pulse crops is bringing food security to a growing number of Ethiopia's poorest families. These tested solutions are being extended throughout Ethiopia's southern highlands, where livelihoods and diets are heavily dependent on cereals and root crops that contain minimal protein and deplete the soil of nitrogen.

Combatting stunting and anemia

Investments in child health in Ethiopia have contributed to a significant decline in the death of infants and young children over the past 20 years. But challenges remain: Ethiopia ranks fifth globally in terms of stunting while anemia affects nearly 37% of children under 5. Addressing this gap is the goal of a unique partnership between farmers (30% of whom are women), processors, consumers, universities and government to transform subsistence agriculture into a dynamic, market-oriented enterprise.

Building on nearly 20 years of collaboration between Canadian and Ethiopian scientists, CIFSrf researchers developed practical solutions to encourage adoption of healthy and soil-building pulse crops (chickpeas, lentils, faba beans, and snap beans) in poor regions with huge untapped potential. This market-driven solution is creating food systems that are more efficient, productive, and environmentally sustainable.

Promoting agriculture and nutrition

Innovations in pulse production and nutrition developed from previous research will be spread widely across southern Ethiopia, using public and private sector models and business case approaches.

The project will increase access to high-yielding pulse seeds for more than 70,000 households, and spur consumer demand for culturally appropriate food products such as pulse-cereal porridge and chickpea-sorghum flat bread.

This initiative aims to boost national chickpea production from a low of 1.3 tonnes per hectare (even lower in southern Ethiopia) to a potential yield of 4.5 tonnes per hectare. Higher yields will support the government's development goals of expanding export markets for pulse crops and reducing widespread malnutrition.

Farmers, both men and women, will receive specialized training in finance, marketing, and value chains. Students and young researchers from Ethiopia and Canada will gain skills in working with the private sector and government in taking innovations to scale.

Expected outcomes

- Improve the lives and livelihoods of more than 70,000 rural households, producers, processors, and consumers
- Increase yields by up to 40%
- Improve soil fertility
- Double farmers' incomes
- Establish community-based seed systems and small seed businesses
- Improve dietary diversity by increasing the amount of pulses sold in local and international markets
- Expand supply and demand for three-to-five pulse-based products with enhanced nutritional quality
- Establish protocols and guidelines for health and agriculture regional authorities to further scale up solutions.

LEAD RESEARCHERS

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