

PULSE POWER

In Ethiopia, protein-rich crops of pulses such as chickpeas are no longer playing second fiddle to maize and wheat, a shift that's transforming lives

POSTED BY BRIAN BANKS ON JANUARY 26, 2018

There have been many milestones in the 10 years that [Carol Henry](#), the assistant dean for nutrition and dietetics at the [University of Saskatchewan's College of Pharmacy and Nutrition](#), has been working to alleviate food insecurity and malnutrition in southern Ethiopia — an area long plagued by drought, poor soils and low protein-yielding crop selection and agricultural practices.

Early on, [partnering with colleagues at Hawassa University](#), 275 kilometres south of the country's capital, Addis Ababa, her efforts centred on expanding teaching in farming practices and nutrition, institutional and community capacity-building, and research into crop development and effective social outreach. Her goal? To create a system that can provide local households with the knowledge and materials they need to augment traditional cereal crops and cereal-based diets with high-yielding crops of nutrient-rich pulses, such as beans or chickpeas.

But in the last three years, the emphasis of Henry's work has shifted from developing that knowledge to applying it on a larger scale. And on her latest visit to the region in December 2017, she saw evidence of these practices taking hold — and bringing the expected nutritional, social and economic benefits in the process.

"In 2016, we were in Ethiopia in May and June, and there was widespread drought," she explains. "One set of female farmers said that while we'd taught them well, they didn't have the beans they needed to make food that would complement their cereal-based diet. So we arranged for the university to give each of the women two kilograms of haricot beans, some fertilizer and training to plant and grow the beans. When I went back in 2017, one woman had, from the two kilos, reaped 80 kilos of beans. Another one had produced 70 kilos, and so on."

This "set" of female farmers numbered 368. It's a significant total, yet just a fraction of the 10,000 women farmers, and 70,000 farmers overall, reached in the latest phase of this [pulse-based food-security project](#), which is financed by the Canadian International Food Security Research Fund, a joint program of the International Development Research Centre and Global Affairs Canada, and ends in March 2018.

"We asked the women what they're doing with the beans," Henry continues. "Most of them said they ate some, saved some to plant next year and sold some."

The carryover for subsequent years is essential if the changes are to be self-sustaining. It's also a reflection of the program's success in overcoming a spectrum of obstacles to the acceptance and use of pulses.

Traditionally, many Ethiopian small farmers only grow crops such as maize and wheat. As a result, their diets, especially those of young children, consist largely of cereal-based porridge, which lacks micronutrients and essential proteins such as lysine. Puls-



Sefiya Heliso harvests chickpeas in southern Ethiopia. Heliso is participating in a project that is encouraging people to grow and eat pulses such as chickpeas to help improve food security in the country. (Photo: IDRC/Petterik Wiggers)

es, chickpeas especially, are sometimes grown for sale, but not for eating. The aim of Henry's program has been to encourage widespread planting of higher-quality pulse crops in addition to the cereals, and then to combine pulses with cereal in the porridge to boost its protein content.

Along with testing to determine which pulses would grow best in local conditions and instructing farmers how to produce them, Henry and the Hawassa University team (which included about 200 graduate students trained over the years in agronomics and nutrition) also encouraged pulse consumption, showing people how to incorporate pulses into their diets. "In poor areas, there's always this challenge of people wanting to sell so that they can make money," says Henry. "We had to show farmers that it was important for them to feed their families, especially children and mothers."

In weighing the sustainability of the changes, Henry is encouraged by the number of local partners from government, NGOs and the private sector that have joined in the effort since work began in 1997. She believes such support enabled them to reach beyond their original 70,000-farmer goal. "We had [the Canadian NGO] [Farm Radio International](#) work with us, providing messages on production and nutrition education. Their goal was to reach 135,000 farmers." In a country of 100 million, she says more is needed. "But given the resources that we have, that's pretty big for us."

Henry also emphasizes that the program's societal benefits go beyond food. "Several of the women I met in December said that their husbands used to sell what they planted. But now that they have their own pulse crops they say, 'We're equal partners, we make decisions on what to sell, what to eat and what to store.' It was really good to see that these women could be so liberated just by having their own beans."

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READING AS THINKING

1. A) Before you read the article, read only the heading and predict some of the themes of the article.
- B) Read the article and make a list of the actual themes of the article. Compare your two lists and rank the themes based on importance. Why did you rank them like this?

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2. In the box below, draw or print another picture that could be used to accompany the article. Justify your choice.

3. Why does southern Ethiopia suffer from food insecurity and malnutrition?

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4. In your own words, describe Carol Henry's goal and why it is important.

5. Evaluate the importance of teaching a female farmer to plant and grow beans in Ethiopia.

6. Explain the importance of pulse crops to Ethiopian farming families.

7. Predict how protein-rich crops will further transform lives.

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Think-Pair-Share

8. *Think*

Make a list of places that suffer from food insecurity and malnutrition. Think of areas that suffer from drought, poor soils, limited accessibility, etc.

<ul style="list-style-type: none"> • • • •
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9. *Pair*

Compare your list with a partner and choose one area that is of interest to you both. Think of ways to combat food insecurity in your chosen area using the different lenses presented in the table below. Research as necessary.

	ROLE
Citizen	
Politician	
Non-governmental organization	
Researchers/Academia	
Other	

10. *Share*

As a class, share your findings from each perspective and then discuss how the roles played by certain stakeholders vary depending on the area suffering from food insecurity.

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ONLINE

1. Using [Google Maps](#), locate southern Ethiopia, and explore the area by using Street View and the satellite and map modes. Using the quick facts section and other research tools find the following:
 - a. The different climates
 - b. Major cities
 - c. Major parks or wildlife sanctuaries
 - d. Fields for crops
2. What is food insecurity and how does it happen? Find out more [here](#).
3. Learn more about food insecurity in Ethiopia by watching this [video](#).
4. What does food insecurity look like in Canada? Find out [here](#).
5. Watch this [video](#) to learn about food insecurity in the United States.
6. Learn about [different ways](#) to combat food insecurity.

