

Changing landscapes, Changing Lives: Following the Chickpea Value Chain in Ethiopia

As recently as five years ago a drive through Ethiopia's countryside would have meant driving through lush fields of teff – a small grain cereal that is the primary ingredient of injera, the bread that accompanies every Ethiopian meal. At that time all the legumes combined were grown on about 10-12% of a farmer's land in central Ethiopia. Now, legumes represent about 50% of a farmer's land. A drive through the Ethiopian countryside today means driving through fields of chickpea – a dramatic change as farmers respond to global market demands and grasp at the chance of making a profit.



A farmer for 26 years, Temegnush Dhabi in East Shewa has recently been doing things differently. "For the last four years I have been growing the modern white chickpea varieties. There is no question in my mind. I will keep growing these new varieties."

The white chickpea Dhabi refers to is kabuli chickpea. There is a huge global demand for kabuli chickpea and farmers who can produce the right variety with the right seed size can earn a premium of about USD 1000 per ton.

Dhabi is one of 0.7 million farmers in Ethiopia or one of 44.5 million in sub-Saharan Africa and South Asia who are benefitting from the Tropical Legumes II (TLII) project. Since 2007, the project, funded by the Bill & Melinda Gates Foundation and implemented by a number of members of the CGIAR Consortium and national partners, has been working towards improving the livelihoods of smallholder farmers by enhancing the production and productivity of legumes and providing the right training and information. By including these nutritious and resilient legumes that are suited to the climate in their farming systems farmers are able to diversify their activities, earn a profit, and also promote soil health.



In order for chickpea producers in Ethiopia to capture the profits of the export market, they have to grow chickpea varieties that match the growing conditions in the country with market requirements. Enter 'Arerti' - a kabuli variety with a name that means 'not afraid of drought.' A series of tests and on-farm demonstrations as well as training conducted by the Ethiopian Institute for Agricultural Research (EIAR) through the TLII project determined the potential of Arerti in Ethiopia and introduced farmers to the variety. Arerti has increased farmers' yields from around 600-700 kg per hectare to around 1,700 kg per hectare. As a legume, chickpea also increases nitrogen levels in the soil, improving soil fertility on farmers' fields.



The large-scale adoption of a new variety means that a lot of seed must be made available to farmers. In anticipation of this need, the TLII project trained selected farmers in the correct methods of seed production. Bedilu Mamo is one of these newly trained seed producers in Memhir Hager village. He has produced 3.5 tons of Arerti seed to sell. "I expect a minimum of 30,000 Birr (USD 1700) from the sale of seed this year," he says. Mamo will use this money to pay for school fees for his children and reinvest in better technologies for his farm.



Gebeyehu Melesse is both a farmer in the city of Gonder and a shop owner in Casa Nchis, a small neighborhood in Ethiopia's capital Addis Ababa. The streets here are crowded with tiny shops and bags of grain bearing the price of kabuli chickpea – Ethiopian Birr (ETB) 20. (USD 1 = ETB 18).

As the chickpea makes its way from fields to markets it increases in price – reflecting the costs of transport as well as any cleaning and grading that may have been carried out. The chickpea continues to change hands in a varying number of transactions as small traders like Melesse sell to larger brokers who bulk up the chickpea into more desirable amounts for export companies who need to trade in large volumes.



ACOS Ethiopia is one of the largest chickpea export companies in the country. Established in 2005, ACOS mostly serves the canning industries in the UK, Spain, Germany and Italy. There are also new markets opening up in the USA, Canada and the Middle East. Vast quantities of chickpea move through an assembly line on conveyor belts where the grain is checked for pests and sorted by color and size. The cleaned and graded chickpeas are then transported to the EU via Djibouti through a supply chain that takes 20-30 days for completion.

ACOS cannot satisfy the demand for chickpea. They are working to increase their network of traders and exploring options such as contract farming with smallholder farmers in order to ensure a consistent supply of chickpea. As the demand for chickpea continues to grow, Ethiopian farmers are well-positioned to earn better incomes and improve soil fertility on their limited land.

Tropical Legumes II: Boosting yields and incomes

Tropical Legumes-II is a joint initiative of three international agricultural research centers: ICRIASAT (chickpea, groundnut and pigeonpea), IITA (cowpea and soybean), and CIAT (common bean), in close collaboration with partners in the national agricultural research systems of 13 target countries in sub-Saharan Africa (SSA) and 2 in South Asia (SA).

TLII aims to increase productivity and production of legumes and the income of poor farmers in SSA and SA by at least 20 percent, with improved varieties occupying 30 percent of the total area planted by some 57 million poor farmers within 10 years. This should result in an additional value gain of more than US\$ 300 million during that period.

The project's strategy is to fast track testing and adoption of existing varieties and advanced breeding lines for use by farmers; generate new farmer- and market-preferred varieties and hybrids with desirable traits (high yields, tolerance to moisture stress, and resistance to pests and diseases); and establish decentralized, pro-poor seed production and delivery systems. This work is supported by the Bill & Melinda Gates Foundation.

