

Demand-led tomato value chain: designing new varieties to improve productivity and adoption

Workshop in Ghana, June 2015

In the search for food security and higher productivity of staple food crops in Africa, vegetables are often forgotten. However, vegetables such as tomatoes are key for health and nutrition, being an important source of vitamins, minerals, antioxidants and fiber. They are also an important cash generator for many smallholders farming 0.4 - 1 hectare.

In Ghana about 90,000 such smallholders grow tomatoes to supplement their income. Tomatoes, however, mean more than just cash. They are an indispensable ingredient in the daily diet, used either fresh or in sauces and soups at most meals. Tomatoes account for some 40% of household outlay on vegetables.

With current average yields of only 6 -7 tonnes / ha, demand outstrips supply. Consequently, the import market for fresh tomatoes has grown in recent years. Many travel hundreds of kilometers from Burkina Faso. Almost 80,000 tonnes of puree and pastes are imported annually from China and the EU. However, Ghana could produce most of its own puree, if the processing plants were properly operational. Several difficulties hamper local production. They include lack of the right tomato varieties, inadequate and unreliable supply, and competition from the fresh markets.

The Syngenta Foundation (SFSA) is helping to tackle this problem. We are co-leading a demand-led new variety design project. This is on behalf of the [Alliance for Agricultural R&D for Food Security](#) (SFSA, Crawford Fund and the Australian International Food Security Research Centre (AIFSRC)), with project management support from University of Queensland. The project unites best practice in training and implementation, and asks policy makers and donors to encourage market-led approaches to increase adoption of improved varieties across Africa. We are partnering here with Prof. Eric Danquah and his team of scientists and educators at the West Africa Centre for Crop Improvement. [WACCI](#) is a center of research excellence and the largest educational institution in West Africa training the next generation of plant breeders. Together we aim to contribute best demand-led R+D practices from the public and private sectors.

In June 2015, WACCI convened a workshop of stakeholders in Ghana's tomato industry. The aim was for researchers to understand value chain needs, and see how improved varieties and R+D can improve domestic production to serve Ghanaian households and processing markets. Participants included officials, farmers, processors, traders, seed producers, economists, crop and food scientists and irrigation experts. Together they formed a Tomato Consortium to address the challenges facing the industry. Workshop lessons and the network created there will now shape detailed market research to design improved varieties for Ghanaian smallholders and their value chains. Demand-led approaches for a national breeding program will also feed into PhD and MSc plant breeding curricula.

At the workshop, WACCI also launched and sought support for its Vegetable Innovation Laboratory. Scientists there will focus on tomatoes and other important crops for West Africa. These include sweet and chilli peppers, onions, garden eggs and other indigenous vegetables.