



KEY CASE STUDY
SWEETPOTATO
 FOOD SECURITY



AbacusBio have been collaborating with the International Potato Center (CIP) in Uganda to identify priorities and create solutions to identify traits that are important to stakeholders across the sweet potato supply chain. In turn, such insight would inform breeding decisions, so CIP's breeding endeavors can become much more market-driven than in the past. CIP is a research centre within the CGIAR, the global research partnership for a food secure future. CIP manages potato and sweetpotato varieties across developing nations in Africa, South Asia and Latin America, and helps to deliver science-based solutions that enhance a stable, accessible nutritious food supply.

Sweetpotato is a staple food crop in developing nations, where it is grown more than any other root crop. The plant has multiple edible parts and through genetic improvement has become a very effective tool to deliver Vitamin A at large scale, benefitting over 6,800,000 small farmers and their families to date. .

Together with CIP, AbacusBio are identifying traits of importance in sweetpotato. The project team has carried out wide scale surveys of stakeholders across the sweetpotato supply chain including consumers, vine multipliers, traders, and farmers. To execute the survey, the platform 1000Minds® was utilised to quantitatively specify relative trait preferences. Along with other tools such as Surveygizmo® software, the project team was able to determine socio-demographic and systematic drivers of trait priorities across supply chain groups and typologies. This is the first ever study of such nature completed in a breeding program of CGIAR centers.

This project has helped to understand the relative importance of traits for future plant development and breeding programs, identified how the market can be segmented based on trait preferences, and aided in defining economic selection indexes to meet the needs of the wider industry. CIP's Director of Research Hugo Campos highlights the comprehensiveness of the market intel study, desiring to replicate the approach in other countries where sweetpotato breeding is a top priority. Such studies would be very relevant as well to any CGIAR breeding efforts willing to become more market-driven.

The partnership between CIP and AbacusBio was of mutual advantage, "It is a big leap forward in terms of how we are modernising our breeding operations" highlighted Campos. Named in the top 10 organisations within the food security sector, CIP granted novel opportunities for AbacusBio within this space. The main objective of the project is to increase adoption of new varieties, a result of greater user engagement and buy-in for all sweetpotato stakeholders.

This project enabled AbacusBio to contribute to a more secure, stable, and accessible supply chain from breeding program to farming, and trading to consumption. This collaboration was made available through the financial support of Excellence in Breeding, The Bill & Melinda Gates Foundation, UK's Foreign, Commonwealth & Development Office, and the CGIAR-CRP Roots, Tubers & Banana

- Sweet potato despite its name is not related to the potato. Unlike the potato - which is a tuber, or thickened stem - the sweetpotato is a storage root.

- The growth of sweet potato crop is outpacing all other crops in sub-saharan african

- global production of sweet potato exceeds 105 million metric tons annually.

