



🔑 CASE STUDY  
**NEXTGEN CASSAVA**   
 FOOD SECURITY

AbacusBio is working in collaboration with the NextGen Cassava breeding project, led by Cornell University and the International Institute of Tropical Agriculture (IITA), to provide expertise on trait prioritisation. The breeding project is overseen by CGIAR, a global partnership that connects International organisations engaged in research on stabilising a secure food supply. The programme is funded by the Bill and Melinda Gates Foundation, Cornell University and UKaid, and involve a series of institutions, including the Excellence in Breeding Platform (EIB)

Cassava is a staple crop to food security and livelihoods across Africa. The root vegetable is drought resistant, and its calorie dense properties are highly valuable in developing countries. However, the production process is still less than optimised. There is still slow uptake of new varieties of cassava by farmers, because of differences in alignment with trait preferences between stakeholders. AbacusBio is involved in supporting development of breeding objectives that meet the preferences of stakeholders in order to maximise Cassava production, and to secure food supply.

To identify trait preferences for cassava, the platform 1000Minds alongside other tools was utilised. This approach uses preference-based online survey software, that quantitatively specifies relative trait preferences.

This allows AbacusBio consultants and the NextGen Cassava team to understand the socio-demographic or systematic drivers of trait priorities between different groups and typologies of farmers, in order to establish product profiles. By adopting a new way of breeding based on well-designed, market driven product profiles, the project aims to see increased adoption of new varieties, due to higher user engagement, and a greater understanding of the market

Consultants Tim Byrne and Bruno Santos, alongside PhD student Ireti Balogun are involved in the 5 year project spanning 2017 – 2022. After analysing and interpreting findings they will deliver a complete report detailing rationale, methodology, results and implications in the context of trait prioritisation and valuation.

PhD student Ireti Balogun is also working on the NextGen Cassava project in Nigeria, researching how these improved varieties impact the livelihood of smallholder farmers and their households, - whom are most at risk to food security. Ireti's project emphasises gender-related traits and its impact on adoption of new varieties. "Cassava is a major staple crop and the main source of calories for 500 million people, especially in Africa. Women play significant roles in cassava production, processing, and utilisation" Ireti's PhD project works closely with rural communities in Nigeria.

→ The root vegetable cassava is a primary component of diets in more than 80 countries

→ The crop is resistant to drought and doesn't require much fertilizer

→ Cassava contains high levels of cyanide so needs to be cooked properly

→ Product profiles are a set of trait weightings for users