CASE STUDY

RICE TRAITS

TRAIT PRIORITIZATION

In Tanzania, rice is the seventh most important food and commercial crop. It holds national importance as a source of employment. Endorsed by the government, Tanzania's national rice development strategy was implemented in 2008, it focuses on progressively transforming the existing rice sector into a commercially viable production system. Following this transformation AbacusBio have been working with the International rice research institute to further propel the sector, designing participatory methods to identify trait priorities for breeding programmes.

High-performing breeding programs know the needs of their customers, apply cross functional expertise to product design, and implement upfront planning. These high-performing breeding programs focus on a variety replacement strategy guided by a well-designed, market-driven product profile. By adopting a new way of working based on product profiles, new product design can focus on client needs rather than being a by-product of scientific research interests.

Product Profiling focuses in on the most important traits needed to create effective products. This provides a blueprint for breeding teams to deliver impactful products in as short a breeding cycle as possible. Breeding teams, working like engineers, will follow this blueprint as part of a continuous improvement process to increase variety turnover. Increased variety turnover increases economic impact.

The variety replacement strategy relies on the cross-functional product design team's understanding the economic worth of "value added" traits to assure that product profiles are based upon data-driven assessments, leading to variety replacement.

AbacusBio have developed a platform of survey approaches and tools – supported by software – to investigate preferences for trait improvements (1000Minds® software) and socio-demographics characteristics (SurveyGizmo software), combined with advanced analyses of survey outputs, to inform trait improvement priorities, market needs, and user-focused product profiles.

These approaches have been designed specifically to value traits and inform breeding programs. The outcomes of this project enabled greater user engagement for farmers and stakeholders concerning the process of developing new varieties, defined selection index requirements to meet the needs of breeding programmes and wider market. Alongside encouraged adoption of new varieties and supported trait prioritization and valuation.

RICE IS TANZANIA'S SEVENTH MOST IMPORTANT CROP

IN 2010, TANZANIA BECAME A NET EXPORTER OF RICE, PRODUCING OVER 2.6 MILLION TONS

IN TANZANIA AGRICULTURE ACCOUNTS FOR MORE THAN A QUARTER OF GDP AND EMPLOYS ABOUT 76% OF THE LABOR FORCE.

DECEMBER 2019