

Using methods from Human Centred Design to improve adoption of digital agricultural solutions amongst small holder farmers

Evidence from research with IITA AKILIMO in Nigeria



Introduction



Despite the rapid increase in the number of digital agricultural solutions, the uptake of these solutions amongst small holder farmers remains a challenge. Designing and implementing new technologies needs to account for the local context of the farmers, such as cost, availability, risk, value, social norms.



We present a recently concluded project in Nigeria where we are working with digital providers to equip them in understanding how to encourage behaviors linked with the adoption of digital products and services.

AKILIMO is an agronomic advisory service developed for and with smallholder farmers. It employs state-of-the-art analytics to provide site-specific recommendations that optimize productivity and profits.

Materials and Methods

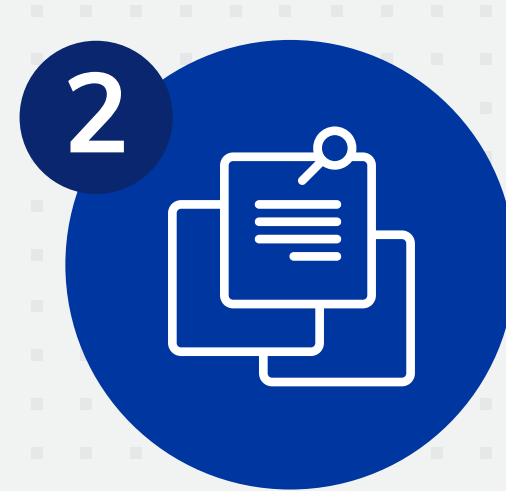
We conducted our research in three phases:

A qualitative deep dive to diagnose the underlying drivers to adoption, followed by a workshop with direct end users to design solutions to the identified barriers.

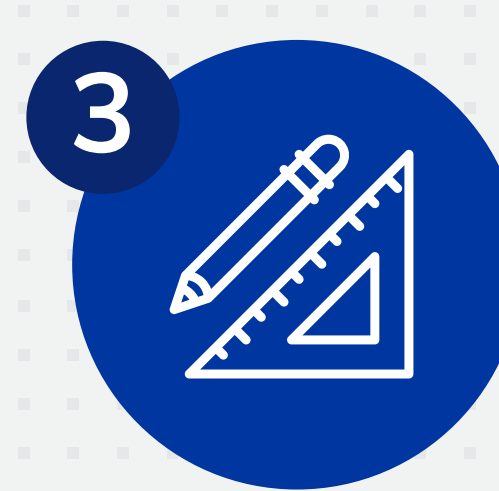
Busara's three research phases:



Diagnostic



Co-Design



Testing

In the testing phase, we conducted a 'lab in the field' with **650 cassava farmers** in southern Nigeria.



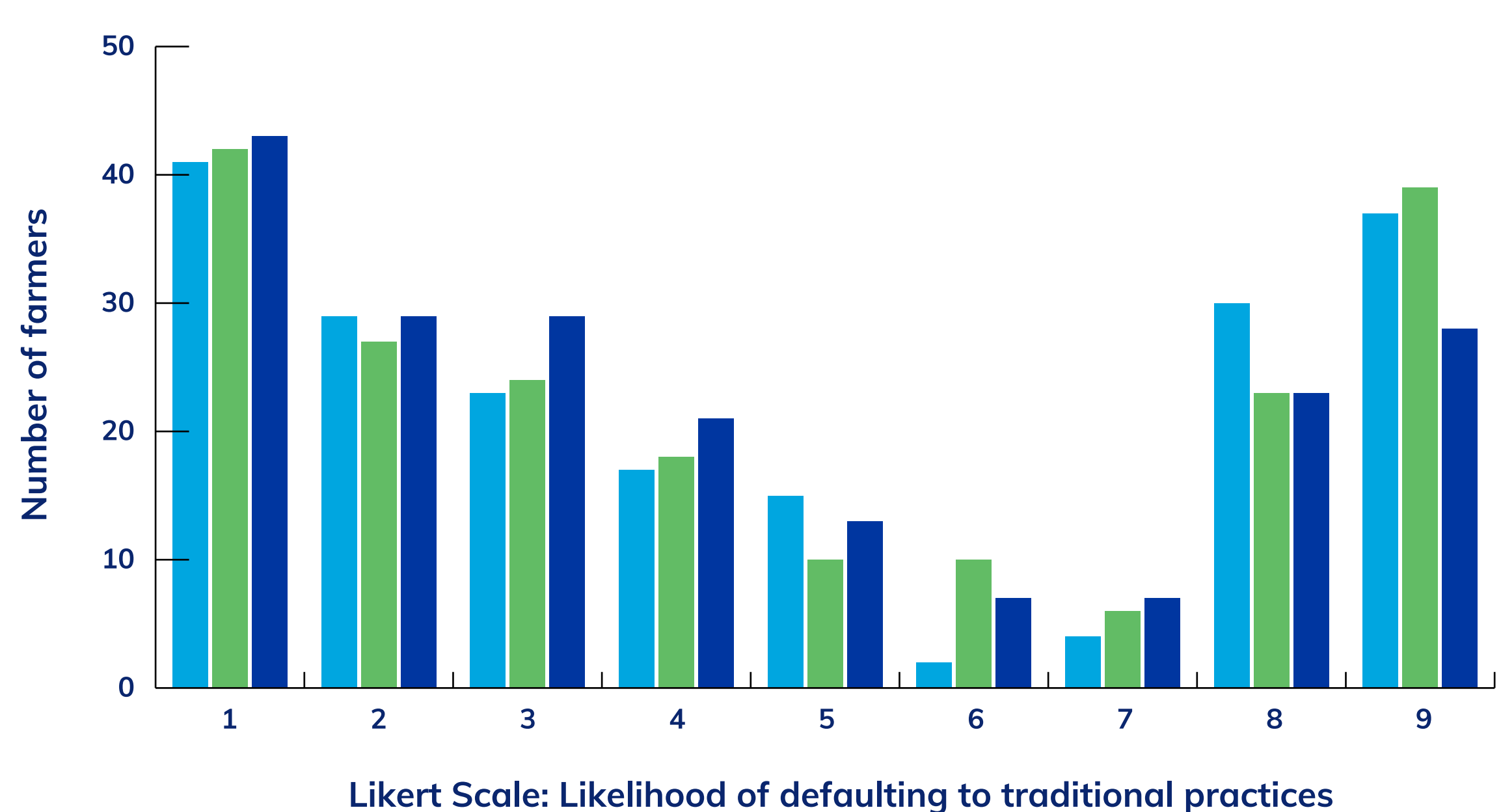
Experiment: Cassava Farming Game



Results

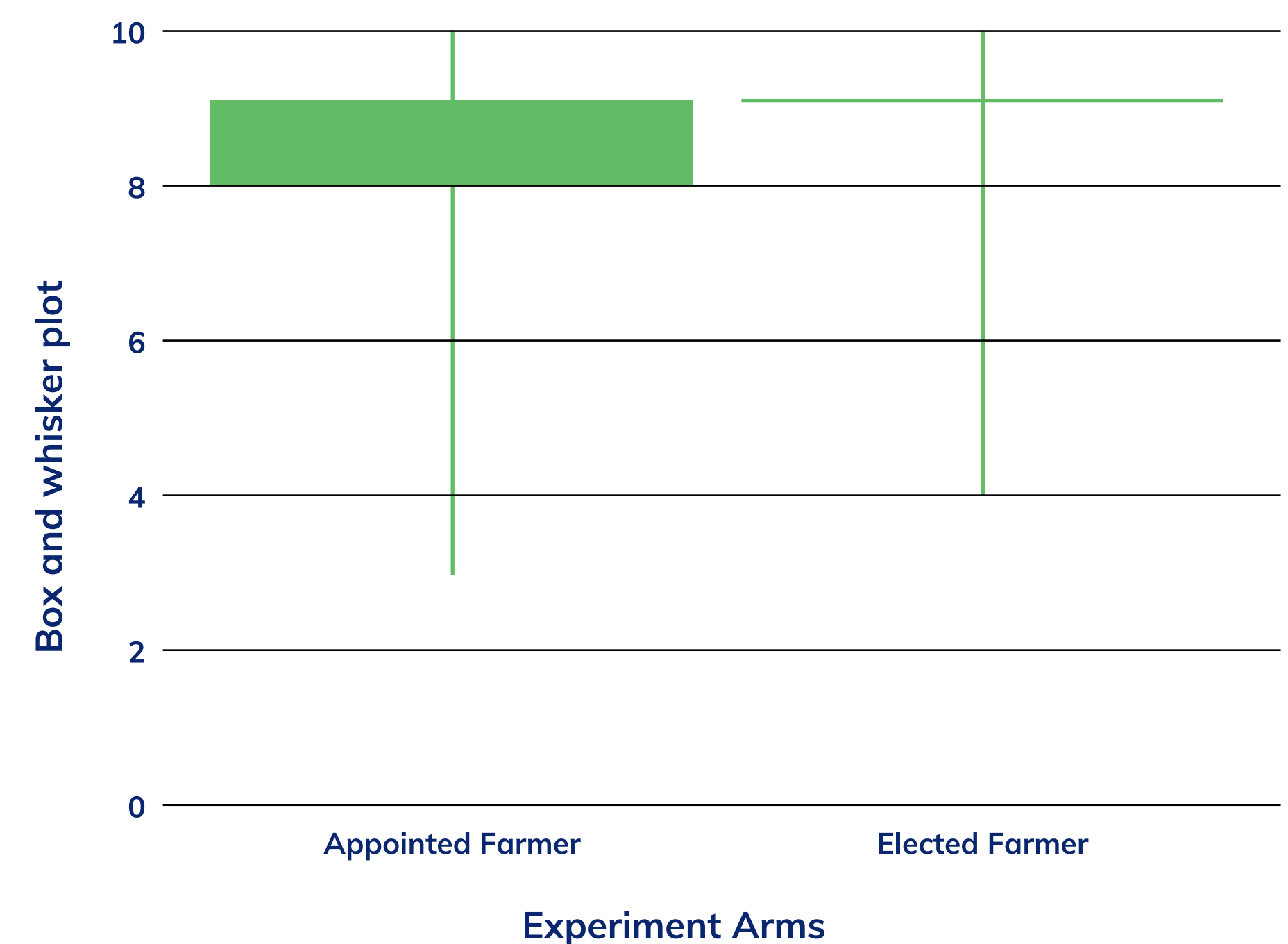
Farmers likelihood of defaulting to traditional practices when AKILIMO is available

Original advisory content (blue), Illustrated advisory (green), Advisory with messages around traditional practices (dark blue)



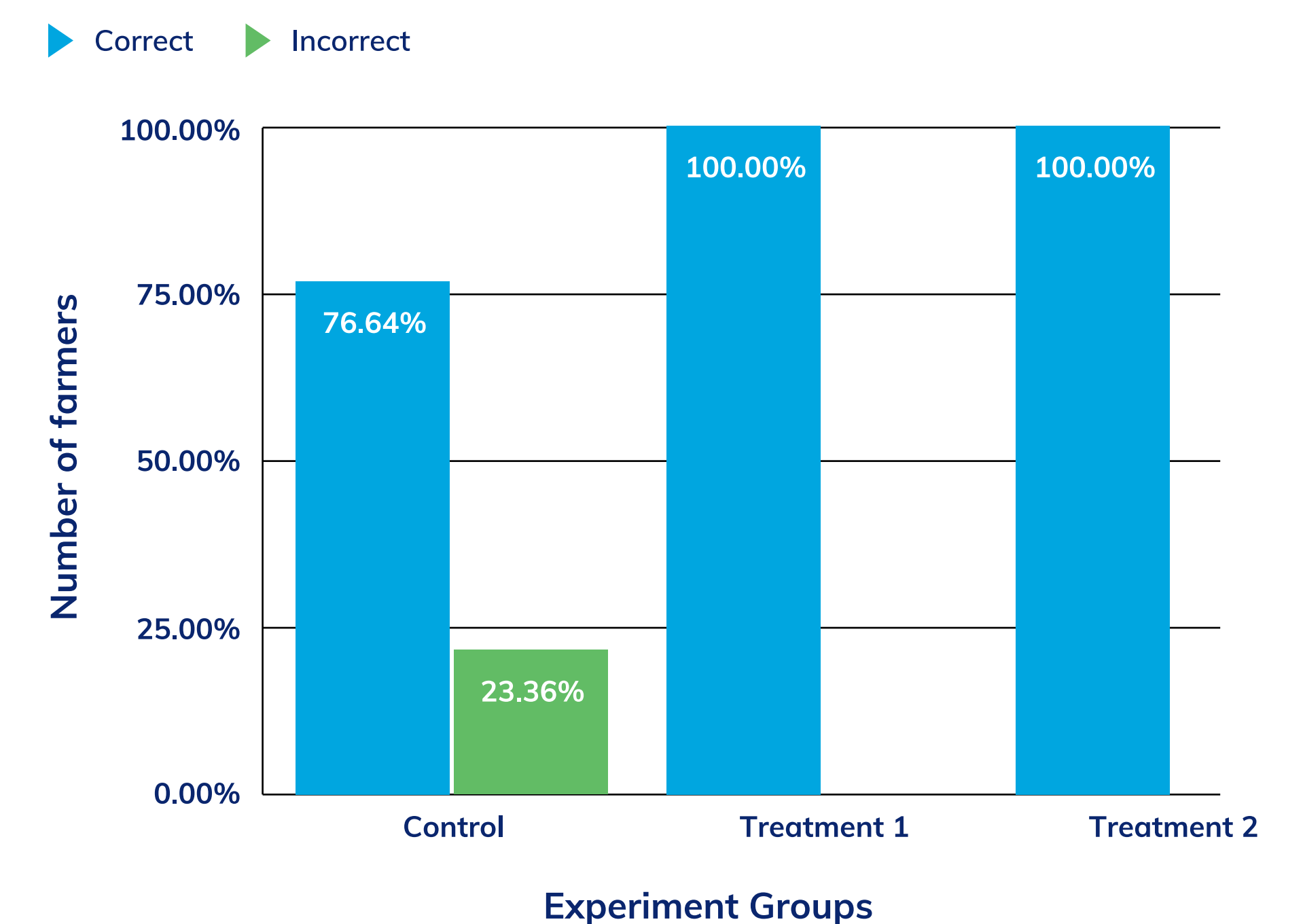
Farmers engaging with advisory messages that acknowledge their indigenous knowledge, are less likely to default to traditional methods when new age advisory is made available.

Likelihood of following AKILIMO practice: Seeking out the farmer



Farmers are more likely to seek out a representative lead farmer for advisory information when this person is elected by them instead of simply being appointed.

Comprehension check: Higher the yield, lesser the fertilizer



Farmers engaging with illustrated advisory is correlated with improved farmer comprehension of certain technical aspects of the advisory.

Conclusions

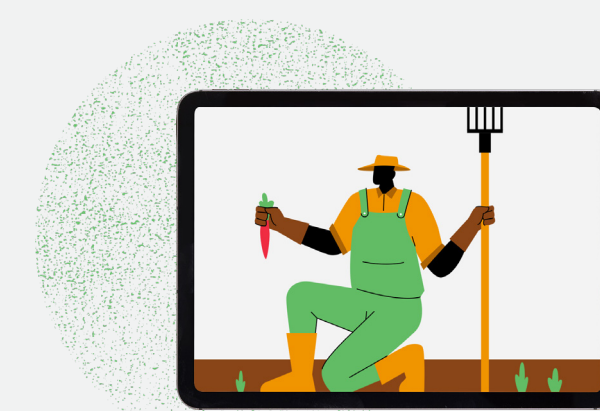


Extension agent networks are the go-to mode of information dissemination across all geographies and providers - ensuring that the community farmer's voice is heard and reflected in the choice of this agent, improves the likelihood of uptake.



Farmers are interested and they do respect new methods and advisory. However, as providers, it's important to acknowledge and respect their traditional methods first, before introducing new methods.

Use of messaging that does not disregard inherent knowledge is crucial: for example 'New age challenges requires new solutions'.



Advisory content needs to be presented in a way that keeps farmers engaged and curious to learn more. Providers should consider using more illustrations than text, in their content, so as to not make farmers overwhelmed by information.

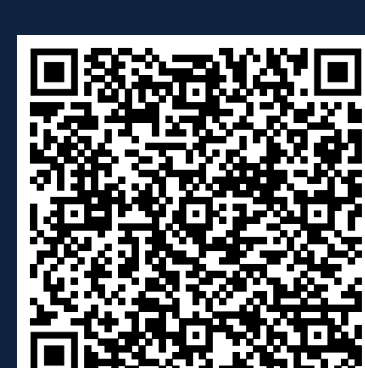
DIG-IT-AL grant

With support from the Bill and Melinda Gates Foundation, Busara is conducting research with five providers of digital farming solutions.

We are testing a total of 12 intervention ideas across five digital service providers in Asia and sub-Saharan Africa. The research under this three year grant will soon be made available on a microsite.

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