ClimMob, digital platform to support triadic comparisons of technologies (tricot)

Disrupting variety selection

ClimMob is a digital platform for massive participatory variety trials, following a crowdsourced citizen science approach we have called “triadic comparisons of technologies” (tricot).

A very simple format of farmer variety evaluation, ranking three varieties, makes it possible to involve many farmers.

The resulting information supports variety release, the creation of location-specific variety recommendations, and an analysis of unmet varietal needs.

Some of the advantages are that (1) we reduce costs and diffuse seeds massively while evaluating suitability; (2) we avoid “leadership effects” in choice data; and (3) we have sufficient statistical power to distinguish socio-economic and spatial effects on variety choice.

Development

After initial pilots in 2013-2014, we have developed a digital platform, ClimMob, and we are producing evidence demonstrating the feasibility of the approach and impact on variety dynamics. At the same time, we are building partnerships for scaling in Central America, East Africa and South Asia, through bilateral projects, working with a broad array of crops. More than 15,000 farmers have participated in trials.

Example of use: Nicaragua

In Nicaragua, we have worked on bean variety selection with x farmers. Even though this was a relative small trial, the results show that seasonal climate conditions influence variety choice (see Figure below). The results also allow us to recommend portfolios of two or more varieties that do well under different seasonal climate conditions, reducing production risk. Socio-economic variables, including gender-related variables, did not show a strong influence on variety choice, showing these results are robust for different households.

Next steps

We will gradually improve the digital platform. For example, a new version of ClimMob will use barcodes for seed packages and sophisticated ways to standardize data (for example, variety names). This will improve data quality and facilitate data aggregation over time and space, contributing to breaking the “glass ceiling” of farmer participation.

A main challenge we are addressing is to finance large-scale implementation through innovative business models. For example, in Honduras, our partner FIPAH is successfully selling tricot seed packages to farmers and exploring collaboration with local credit providers and farmer organizations. Also for other countries, we are exploring innovative business models around the tricot approach.

Partners

Poster authors: Jacob van Etten, Carlos Quirós, Kaue de Sousa, and Brandon Madriz (Bioversity)
Contact: Jacob van Etten, j.vanetten@cgiar.org