

## Market demand creation and release of new higher yielding, faster cooking common bean varieties with higher iron bioavailability in Zambia



University of Zambia  
(UNZA) Lusaka, Zambia



InnovateUK  
KTN



Dr Kamfwa (front) during a meeting with farmers at Senga Hills District, who display small seed packs of YBC129 and Zerengeti.

## PROJECT OVERVIEW

### Background

The Bean Breeding Programme led by Dr Kelvin Kamfwa at the University of Zambia (UNZA) developed two new common bean varieties to replace the popular landraces Kabulangeti and Lusaka Zerengeti and YBC129. Zeregenti is similar to Kabulangeti but is higher yielding (25%) and resistant to anthracnose, a major disease of common bean in Zambia. YBC129 has the same yellow seed colour of Lusaka, but it is faster cooking, higher yielding (30%) and nutritionally superior because of its higher iron bioavailability.

### Objectives

1. Carry out on-farm cooking and agronomic trials and two field days (on-farm and on-station) to: a) create awareness about Zerengeti and YBC129; b) collect information on farmer and consumer preferences for different characteristics (positive and negative) of the released varieties to inform future breeding programmes at UNZA.
2. Distribute small seed packs (100 seeds) of Zerengeti and YBC129 to farmers to generate market demand.
3. Develop a blueprint to aid the dissemination and commercialisation of improved legume varieties in East Africa. The KT-funded breeding programs in Ethiopia, Uganda and Kenya are also nearing the release of improved common bean varieties.
4. Release Zerengeti and YBC129 as new improved varieties in Zambia.



1. Seed of YBC129 and Zerengeti was given to 620 farmers from three districts including Mpika, Senga Hills and Mporokoso districts, which are the leading districts in Zambia for bean production. The 620 farmers were drawn from 30 farmer cooperatives, and it was a diverse group in terms of age and gender. Each farmer received a small seed pack (100 seeds) of each variety in early January 2023, in time for planting in February.
2. On-farm cooking trials were conducted in the second week of January 2023 in Mpika district to create awareness about the faster cooking time of YBC129 than other varieties currently on the Zambian market. On-farm cooking trials were also used to obtain feedback from the farmers on the preferred culinary traits of YBC129 and Zerengeti.
3. On-farm trials were conducted to assess the agronomic performance of the two breeding lines and to collect feedback from farmers on the traits they prefer. These conversations have provided valuable information to make changes to the breeding objectives of the University of Zambia Bean Breeding program.
4. Two field days were conducted during the project period to create awareness about YBC129 and Zerengeti. A total of 1,200 farmers and government and traditional leaders attended the field days.





Dr Kamfwa distributing seed of YBC129 and Zerengeti to farmers in Senga Hills farming block of Senga Hills District (i); distributing YBC129 and Zerengeti to farmers in Chintu farming block of Mpika District (ii); farmers from Chintu farming block of Mpika District displaying seed of YBC129 and Zerengeti (iii); Dr Kamfwa distributing small seed packs to farmers in Senga Hills farming block of Senga Hills District (iv and v); cooking time and tasting trials for YBC129 and Zerengeti conducted with farmers in Mpika (vi and vii).

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