



AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION  
FONDATION AFRICAINE POUR LES TECHNOLOGIES AGRICOLES

# Seeds2B Project

Malawi Evaluation Trials

2015/2016 Summer (Wet) Season

## Soybean Trial Implementation Update

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**Contact:** [e.wavomba@aatf-africa.org](mailto:e.wavomba@aatf-africa.org)

**Web site:** <http://seeds.aatf-africa.org/>

## Background

The Seeds2B Project fosters the development of “seed bridges” that link crop breeding initiatives to sub-Saharan Africa’s (SSA) seed systems. The Project facilitates the transfer of better-performing, locally adapted and market-appropriate crop varieties developed by public and private breeders based in and outside Africa to smallholders in SSA through local seed producers and distributors. By adding new commercially viable products to the portfolios of local seed enterprises, the Seeds2B Project helps smallholders in the region serve new markets with the best of locally grown produce. The ultimate goal of the Seeds2B Project is to contribute towards building the capacity of SSA’s commercial seed sector and advancing food security in Africa.

A dedicated team of experts from the African Agricultural Technology Foundation (AATF) and the Syngenta Foundation for sustainable Agriculture (SFSA), comprising experienced plant breeders, intellectual property rights experts, business strategists, product deployment professionals and seed policy specialists work alongside local partners to implement Seeds2B initiatives in SSA. Local partners involved include National Agricultural Research Systems; farmer groups, processors and technical organisations specialized in variety screening; organisations that have capacity to demonstrate new improved crop varieties with large numbers of farmers; organisations that link credit or savings to seed purchase; and seed producers and distributors. The Seeds2B partnership:

- Negotiates with private and public breeders for access to high potential crop varieties.
- Assess and benchmarks the performance, adaptability and market acceptance of accessed varieties in research and farmer fields across target agro-ecologies to justify registration and commercial release.
- Provides risk mitigation support for breeders, smallholders and local seed enterprises. This may include creation of advance market demand, guidance on protection of intellectual property rights and direction on regulatory matters.
- Oversees brokered commercial partnerships between local seed enterprises and breeders to ensure benefit for all and more so smallholders in SSA.

AATF is implementing a pilot of the Seeds2B initiative in Malawi and Zimbabwe and leads the scaling of Seeds2B initiatives across SSA.

### About AATF ([www.aatf-africa.org](http://www.aatf-africa.org))

The African Agricultural Technology Foundation is a not-for-profit organisation that facilitates and promotes public/private partnerships for the access, development and delivery of appropriate agricultural technologies for sustainable use by smallholder farmers in Sub Saharan Africa (SSA) through innovative partnerships and effective stewardship along the entire value chain.

### About SFSA ([www.syngentafoundation.org](http://www.syngentafoundation.org))

The Syngenta Foundation for Sustainable Agriculture creates value for resource-poor small farmers in developing countries through innovation in sustainable agriculture and the activation of value chains.

## Introduction

Soybean is regarded as smallholder friendly crop as it displays reasonable tolerance to both abiotic and biotic stresses. The crop is also ideal for crop rotation as it is able to fix atmospheric nitrogen, which increases soil fertility during growth. Soybean thus presents a valuable tool for agricultural diversification, soil improvement and risk mitigation for smallholder farmers in sub-Saharan Africa.

Soybean consumption is soaring in most countries of sub-Saharan Africa, driven by a strong industrial demand in the areas of animal feed and vegetable oil production. However, in many regions of sub-Saharan Africa, average soybean yields are below 1 t/ha, whereas yield of at least 2.5 t/ha are regarded as feasible. Apart from low levels of agronomic know-how at smallholder farmer level, one of the main reasons of such low productivity is the lack of smallholder access to quality seed of a range of adapted soybean varieties that perform well under tropical conditions.

Given this context, the African Agricultural Technology Foundation (AATF) and the Syngenta Foundation for Sustainable Agriculture (SFSA) are working alongside the Soybean Innovation Lab (SIL) on an initiative aimed at introducing new improved tropically-adapted soybean varieties in several regions in Southern, East and West Africa. The Soybean Innovation Lab is a consortium of US universities dedicated to establish viable soybean value-chains across Africa, with breeding for tropically adapted varieties being a major focus area of this consortium (<http://soybeaninnovationlab.illinois.edu/>). As part of the initiative, soybean evaluation trials will be implemented through the Seeds2B demand-led approach. Therefore, processors, input suppliers and seed traders will be engaged during the trial phase. These engagements will aim to facilitate the establishment of a supply of quality seed of better performing soybean varieties to smallholder farmers thus enhance functional value-chains for locally produced soybean.

This update provides a brief on the establishment of small scale Seeds2B Project soybean variety evaluation trials in Malawi over the 2015/2016 summer (wet) season. This update follows a preliminary evaluation of entries at Kasinthula Experiment Station over the 2014/2015 winter (dry) season. A final report on the performance of the entries evaluated at Kasinthula will be shared within the first quarter of 2016.

### Establishment of Soybean Evaluation Trials in Malawi

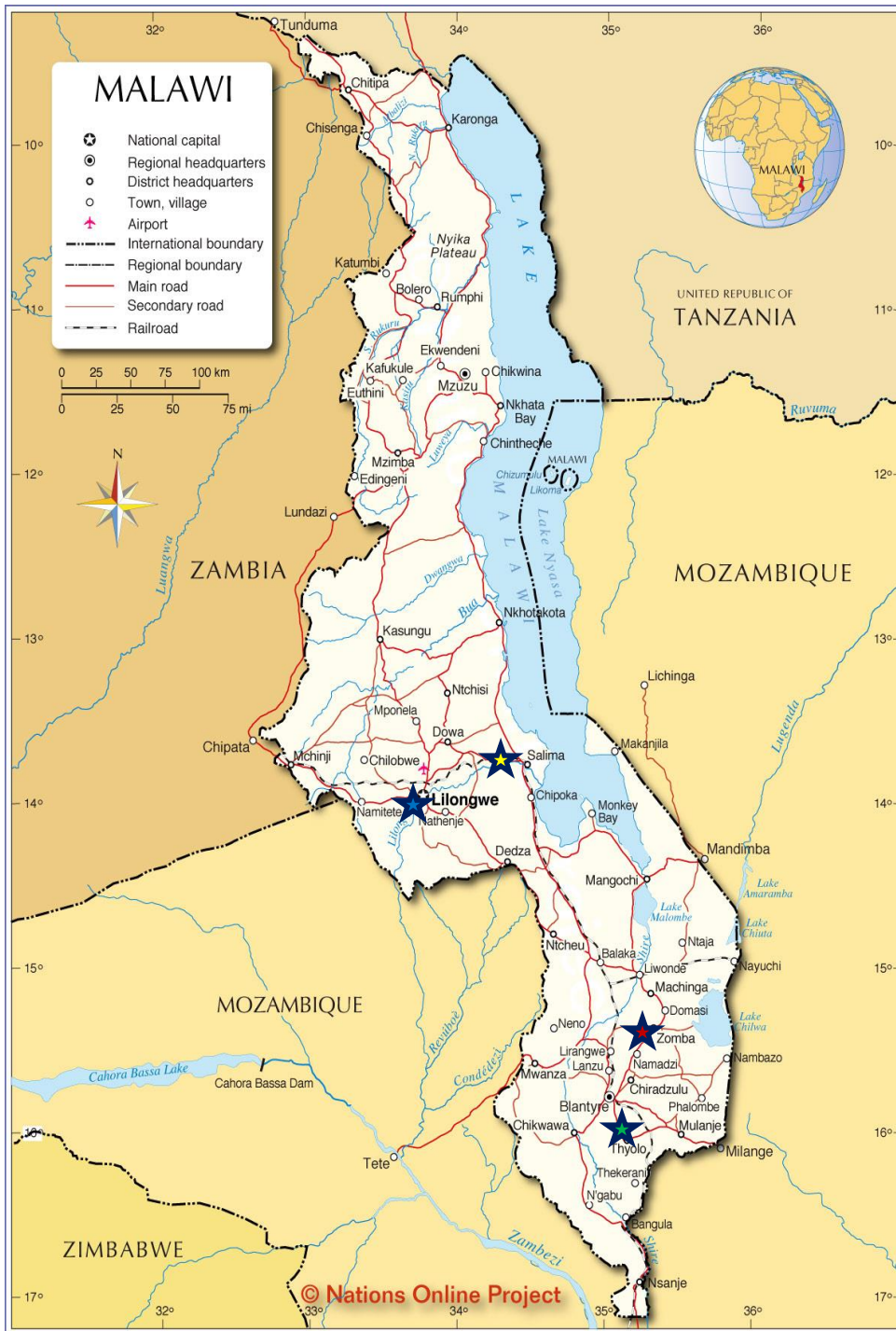
Trial entries consisting of 9 soybean varieties (6 test and 3 check varieties) were sown at Bvumbwe Agricultural Research Station (Figure 1), Chitedze Research Station and Chitala Experiment Station on 16 December 2015, 26 January 2016 and 13 January 2016, respectively, for evaluation. These trials were established in a randomized complete block design with three replications. Further, The One Acre Fund planted 10 rows of each of the 9 entries at their Namikango Experiment Station on 18 January 2016 with the aim of assessing the performance and commercial potential of the entries. One Acre Fund is a nonprofit organization that applies a market based approach to supplies smallholder farmers with asset-based financing and agriculture training services to reduce hunger and poverty. Additional information on the trial sites and trial partners involved in the evaluations are available in appendix 1.



Figure 1: The three replications of the soybean variety evaluation field at the Bvumbwe Agricultural Research Station on 27 January 2016.

The trials at all sites have started on a relatively good foundation. It is however worth noting that due to a persistent strong El Niño, Malawi experienced higher temperatures and below-normal rainfall for the periods October to December 2015. This occasioned late planting and/or replanting in some trial sites. Forecasts indicate that parts of Malawi may experience heavy rainfall and flooding over the months of February and March 2016. Management of the soybean evaluation trials is ongoing. Follow-up updates providing insight into the performance of the entries will be shared as the trials progress.





## Appendix 1

### Trial Sites in Malawi:

- ★ Bvumbwe Agricultural Research Station: latitude 15 degrees 55' S, longitude 35 degrees 04'E - Altitude 1159m
- ★ Chitala Experiment Station: latitude 17 degrees 49' S, longitude 31 degrees 03'E - Altitude 633m
- ★ Chitedze Research Station: latitude 13 degrees 59' S, longitude 33 degrees 38'E - Altitude 1097m
- ★ Namikango Experiment Station: latitude 15 degrees 23' S, longitude 35 degrees 18'E - Altitude 1074m

## Trial partners

- **Department of Agricultural Research Services (DARS)** is the Malawian national research programme. DARS is mandated to conduct research on all crops and livestock production, except for tobacco and tea, in all the eight agro-ecological zones of Malawi. It also provides regulatory and special services to stakeholders in agriculture, including technology dissemination, social-economic studies, statistics and seed technology services. (<http://www.erails.net/MW/dars-info-centre/>)
- **One Acre Fund** is a nonprofit organization that provides a complete set of services to farmers. Their service bundle includes: financing for farm inputs, distribution of seed and fertilizer, training on agricultural techniques and market facilitation to maximize profits from harvest sales. Using a market-based approach to facilitate activities and transactions at various levels of the farming value chain, the One Acre Fund works to eradicate poverty and hunger in the communities it works with.

