

# Sorghum Technology Transfer in Uganda

Kayuki Kaizzi<sup>1</sup>, Charles Wortmann<sup>2</sup>, John Ebyau<sup>3</sup>, Angela Nansamba<sup>1</sup>, <sup>1</sup>NARL, P.O. Box 7065, Kampala Uganda; <sup>2</sup>Univ of Nebraska, and <sup>3</sup>NaSARRI, Soroti, Uganda

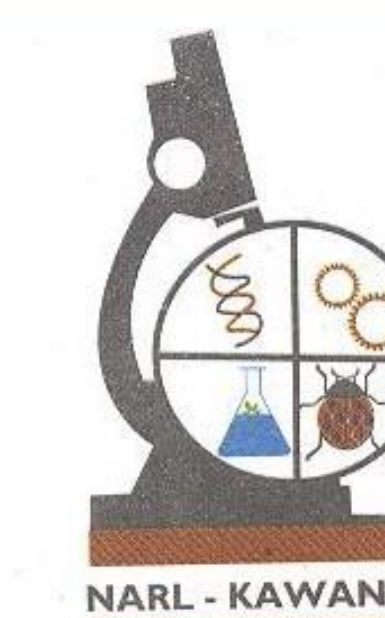


Fig. 1. Dr. Kaizzi (middle) and colleagues in eastern Uganda. Angela (left) is an INTSORMIL-supported MSc student.



## Led by NARL

- 35 sub-counties in 8 districts (Fig. 2) by 2012
- Initiated in 2010
- 348 demonstrations with yield data
- ~6000 farmers attended field days
- Leaflets and posters in the Luganda, Luo, Iteso, and Japadhola languages
- Radio announcements

## Information dissemination

Soil fertility management, water productivity and striga-resistant varieties are emphasized.

- Enhanced water productivity is addressed through reduced tillage and improved soil fertility; reduced tillage increased yield by 37% and greatly increased profitability in farmer managed trials (Fig. 4).
- Options for improved soil fertility management include application of moderate rates of N and P, mucuna as a green manure cover crop that also suppresses weeds (Fig. 4, 5), and efficient use of manure (FYM, Fig. 4).

Fig. 4. Grain yield results ( $Mg\ ha^{-1}$ ) from 348 on-farm sorghum trials in 35 sub-counties.

Control	0.93
2.5 t/ha FYM	1.62
(15 kg N, 7.5 kg P, and 2.5 t FYM),	2.08
(30 kg N, 15 kg P)/ha	2.25
(30 kg N, 15 kg P, 30 kg K)/ha	2.74
Mucuna	1.94

## TOT components include:

- Information transfer
- Enabling fertilizer supply
- Support to variety release
- Seed supply
- 285 agro-dealers and advisors trained
- Studies of: baseline situation, marketing, and adoption

Fig. 2. TOT sites in 2012.

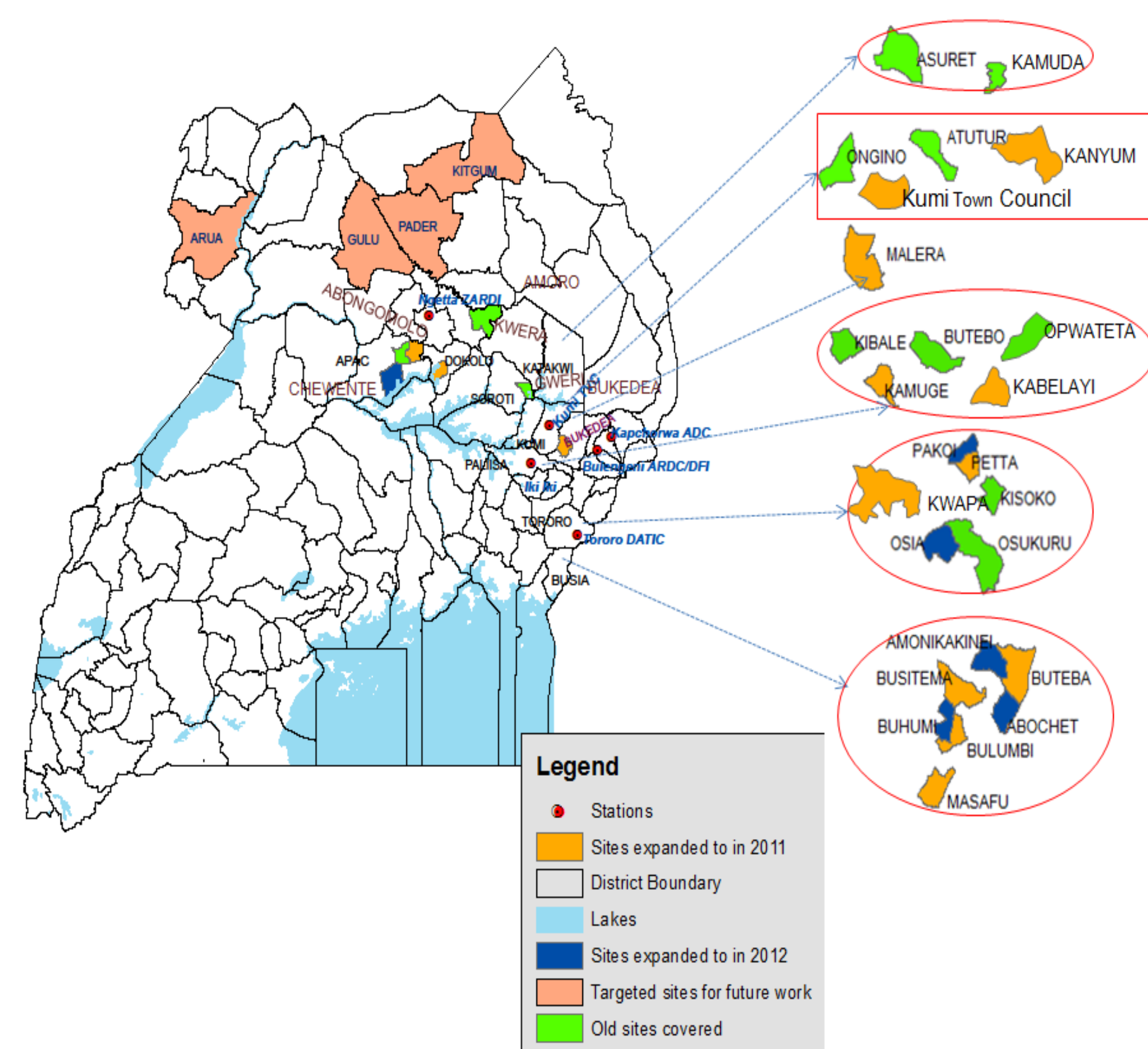
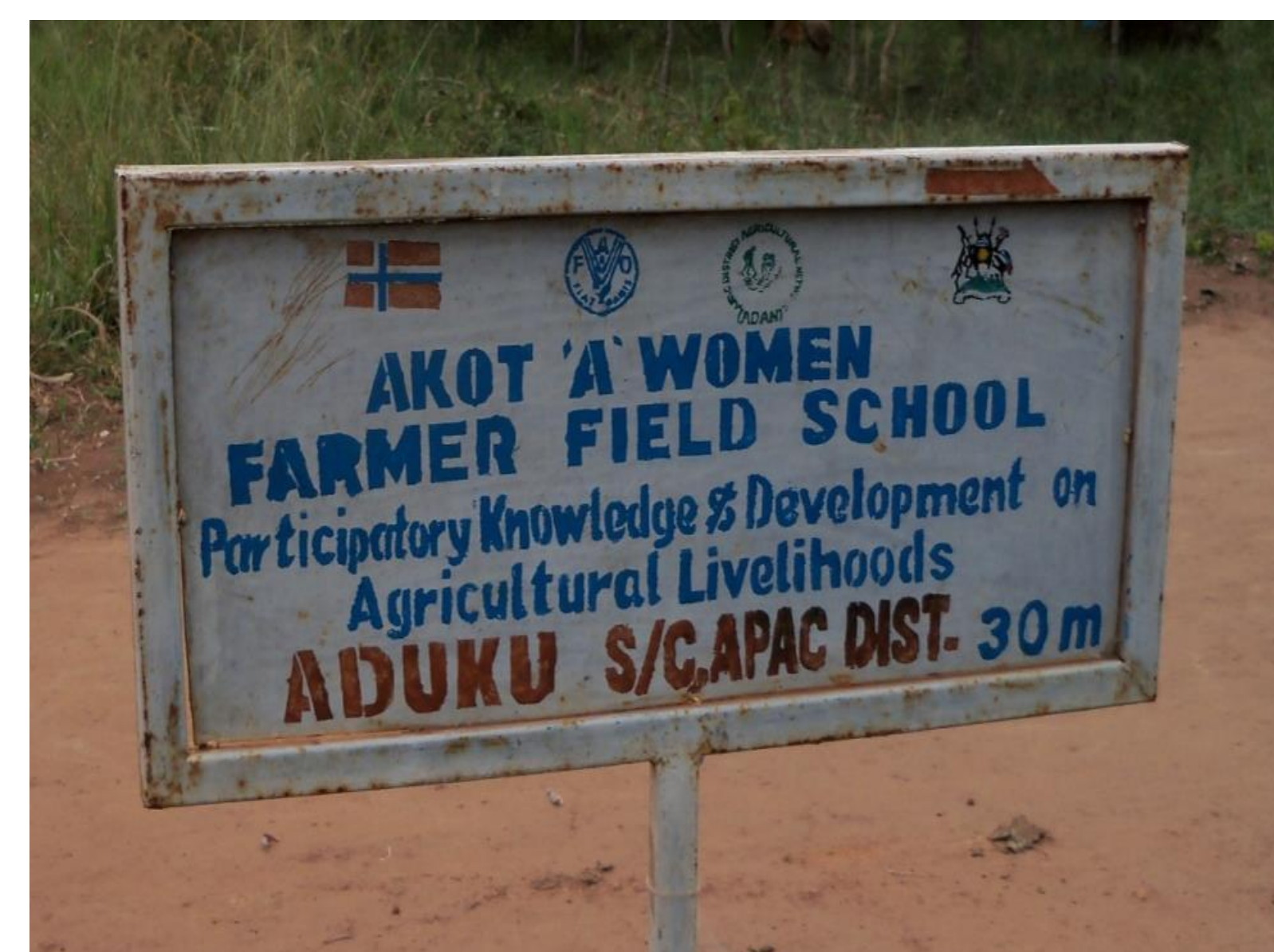


Fig. 3. Local facilitators



Local facilitators (part-time farmers and/or agro-dealers) (Fig. 3) are key to efficient implementation. They

- Assist farmers to ensure timely but inexpensive implementation of trials and demonstrations
- Organize field days and other meetings
- Advise farmers



The project builds on successes of others such as working with farmer field schools.

Fig. 6. Three varieties released in 2011.



## Improved varieties

The project supported multi-location and on-farm variety trials.

- Three varieties were released in May 2011 (Fig. 5): SESO 1 (M91057), SESO 2 (IS 25403), and SESO 3 (SRN 39).
- SESO 1 and 2 were verified by Nile Breweries for commercial lager beer brewing quality.
- NaSECO and FICA seed companies marketed >500 tons of SESO 2 and SESO 3 in 2012 and failed to meet demand for the seed.

The work was funded by USAID through INTSORMIL.

Fig. 5. Mucuna: an easily managed cover crop for weed suppression, reduced tillage, and soil fertility improvement.



Fig. 7. Farmer training on soil fertility management.



Fig. 8. Women and children are beneficiaries of TOT.

