



# Sweet Potato in Ethiopia



Independent  
Science and  
Partnership  
Council

# Methodology

- The objective was to assess the accuracy of three household-based methods for identifying sweet potato varieties using DNA fingerprinting as the benchmark
- Survey took place in January 2015 in the Wolayita zone (Southern Ethiopia) in five districts (kebelles)
- Snowball sampling
- 231 plots surveyed / varieties fingerprinted

# Reference library

- In Ethiopia, 25 improved varieties of sweet potato
- Germplasms collected at two levels: CIP accessions (n=1004) and NARS (n=19)
- Some confusing results:
  - Two highly different varieties (leaf, skin color) are genetically identical
  - Two improved varieties released are genetically identical
  - Several improved varieties not present in CIP accessions
- Transparency in the research process; reproducible research principles

# Main results

- 32% of (DNA-based) improved varieties were identified by farmers as local and 52% of farmers identified a variety as improved when in fact it was a local.
- Variety names (for both improved and local) given by farmers delivered inconsistent and uncertain varietal identities.
- Visual-aid protocols performed better, but still far below the DNA benchmark

# Scaling up

- Sweet potato is important, but not a priority crop for Ethiopian authorities
- Tuber samples > leaf samples
- DNA fingerprinting studies should have the medium-term goal of establishing/reinforcing partners DNA sequencing capacities