CONTRIBUTION OF ISRA TO THE MANAGEMENT OF PLANT GENETIC RESOURCES IN SENEGAL

Dr Mame Codou GUEYE CISSE
mcodougueye1@gmail.com

Dr Ndjido A. KANE
ndjido.kane@isra.sn

International Workshop on Crop Agrobiodiversity Monitoring
Montpellier, March 23-25, 2015
PLAN

• Management of agrobiodiversity at ISRA
  * Past agrobiodiversity repertoire (situation before 2010)
  * Actual politics and on-going initiatives

• Cases studies
  * Fonio
  * Pearl millet

• On going building of managerial Genebanks

• Monitoring expectations
MANAGEMENT OF AGROBIODIVERSITY AT ISRA

Past agrobiodiversity repertoire: situation before 2010

- Plant collections are established and managed only by the concerned breeder or researcher

- Unreliable conservation units and systems (no traceability, storing rooms & electric system inappropriate, lost of many accessions & varieties, etc.)

- No identified *in situ* conservation farms

- Insufficient scientific human resources & lack of seeds technologists
Existing collections

- Cereals: drylands crops (millets, sorghum, fonio), rice
- Leguminous: Cowpea, peanut, sesam
- Vegetables and fruits: Onions, Potatoes, bananas, pineapple
- Trees: baobab, Acacia
- Biofuels plants: Ricinus, Jatropha and Sunflower
Management of agrobiodiversity at ISRA

- Some specific cases:
  - **Sorghum**: In ICRISAT sorghum collection = 242 senegalese accessions from Saint Louis (Fleuve, Ferlo), Kaolack & Fatick (Sine Saloum), Ziguinchor & Kolda (Casamance) & Tambacounda
  - **Pearl millet**: 243 local pearl millet accessions collected between 1992 & 1993
  - **Fonio**: 64 fonio accessions collected in 2003
  - **Cowpea**: 247 & 28 local cowpea accessions collected respectfully between 1953 & 1960 & in 2003
  - etc.
MANAGEMENT OF AGROBIODIVERSITY AT ISRA

• Several sites of conservation, but any reliable
  Bambey
  CERAAS
  URCI
  CDH
  CRA Saint-Louis
  CRZ Kolda

• Institutionnel groups: one on the management on plant genetic resources, another on biotechnologies
POLITICS AND ON-GOING INITIATIVES

• Seed Capital Reconstruction Program

• Agrobiodiversity management and valorization (Waapp 2A)

• PAPSEN (promote production of vegetables in the middle Peanut Bassin and of fruits in South)

• Local Rice Autosufficiency

• Local Onion Autosufficiency

• Promote potatoes value chain through a local seeds production (in vitro production and on-farm multiplication)

• Agroforestry conservation and restoration (parks, classified forests, reserve)
CASE STUDIES

• Fonio & pearl millet WAAPP project overviews

Coordonateurs : Dr Ndjido Kane / ISRA-LNRPV & Mame Codou Gueye Cissé / ISRA-CERAAS

Main research & training activities:
- Surveys and collection of fonio & pearl millet landraces across Senegalese production areas
- Genotypic & phenotypic characterizations of the plant materials
- Core collection establishment
- Shared database and management system
- Training activities: PH.D. and Master II students

Diack et al. 2014
CASE STUDIES

• Fonio & pearl millet WAAPP project overviews

Regional & international partnership / Links

- IRD (Adeline Barnaud, Yves Vigouroux, etc.)

- CIRAD (Claire Billot, etc.)

- link with regional project in terms of procedures and data exploitation (ARCAD)
ON GOING BUILDING OF MANAGERIAL GENEBANKS

- Construction/installation of cold rooms for short, mid and long term storage
- Construction of drying shed and working spaces for seeds conditioning
- Installation and training session for management system use
- Training at master level for seed technologist
EXPECTATIONS / MAIN MONITORING QUESTIONS

- Urgent needs of seeds technologists to maintain collections

- Have clear politics on resources exploitation, shared of IP, rights, seeds exchanges,

- Favored in situ and on-farm conservation

- Local knowledges and rights
Thank for your attention