



## WORKSHOP on Invasive Species Identification and Management in the Tropics

May 12- 15, 2014, Dakar, Senegal

Focus : *Ralstonia solanacearum* in Solanaceous Vegetables and *Papaya Mealybug*

# Bacterial Wilt in Senegal

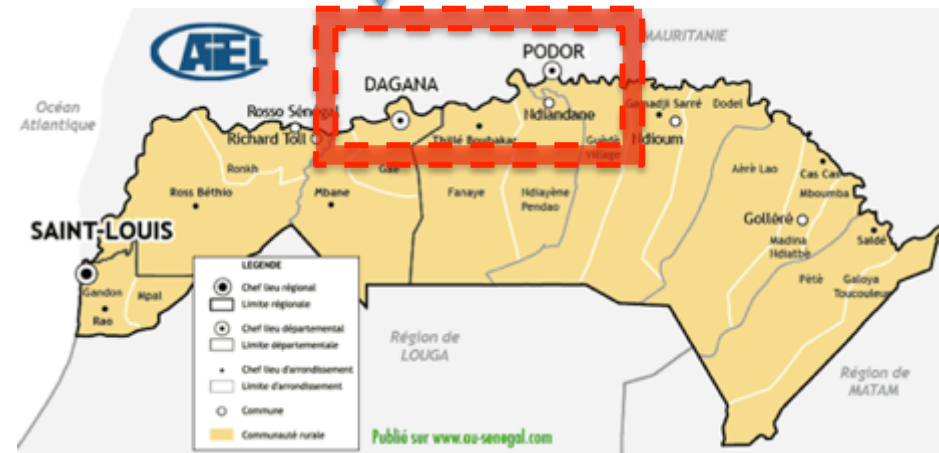
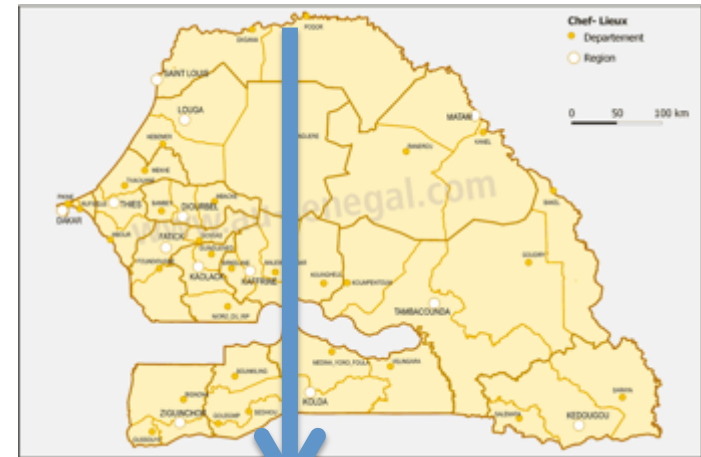
- Dr Papa Diedhiou, Université Gaston Berger de Saint-Louis
- Boubacar DRAME, Plant pathologist, ISRA/CDH

# Plan

- **History of bacterial wilt in Senegal**
- **Importance of bacterial wilt in tomato and potato production**
- **Management options experimented**
- **The way forward : CORAF/WECARD project**
- **Perspectives**

# History

- First diagnosis in January **2011** (Papa Kane *et al*) on tomato
- Site : **Bokhol** and **Gaya** (north of Senegal, main tomato supplier for industry and fresh tomato market)
- Diseases symptoms might have been seen 6 years ago (farmers said)



# Importance of disease

- Crop loss (tomato, other solanaceous plants)
- Spread in Senegal (**Dagana, Podor**)
- Legal issues (Quarantine status (bacterial wilt is quarantine agent for Senegal))
- Impact on subregional trade i.e. prohibition of seed potatoes from Guinea due to bacterial wilt)
- Resurgence of bacterial wilt causes major losses to horticultural crops and increases the vulnerability of small producers



# Management strategies for *Ralstonia* bacterial wilt

- Organization of extension meeting **on bacterial wilt for** tomato farmers (9-10 march **2011**, in Ndiaye/village) on:
  - Symptoms of tomato wilt
  - Rapid diagnostic method (rapid presumptive test of bacterial wilt)
  - Sources of inoculum
  - Management (nursery, before planting, farmer, post-harvest process)



# Management strategies for *Ralstonia* bacterial wilt

- **2012/2013** Evaluation of tomato germplasm for resistance against bacterial wilt
  - Grafting tests on wish tomato varieties on varieties disease resistant ones and on eggplant
- (Papa Demba Kane, Samba DIAW, Daba Thiam and Alla Diop/ farmer) **Support : IMP/CRSP**



# Management strategies for *Ralstonia* bacterial wilt

- **2014** : Evaluation of bacterial wilt resistance
- Screening of 13 tomato varieties for resistance to bacterial wilt
- Boubacar DRAME, Aminata Hamedine SY, Papa Demba Kane, and farmers (Thierno Gueye, Amadou Tall and Oumar Niang))
- **Support : CORAF/WECARD**



## Research for containment and sustainable production of solanaceous crops in *Ralstonia solanacearum* infested agroclimates : the CORAF project

- Sub-regional project funded by the CORAF/ WECARD for an integrated management of bacterial wilt disease
- **Objective :**
  - ✓ promote **food security** of rural populations by improving their income in project areas
  - ✓ **improve productivity and competitiveness** of tomato and potato in the context of climate change



# CORAF project : Outcome

- **Result 1** : the strain occurring in West Africa are characterized and their distribution map is established for countries covered by the project
- **Result 2** : Good production practices adapted to climatic changes are promoted for tomato and potato, with respect to bacterial wilt
- **Result 3** : Capacity building of actors (value chain)



# CORAF project : partners

- Institut de l'Environnement et de Recherches Agricoles (INERA) - **Burkina Faso**
- Institut de Recherche Agronomique de Guinée (IRAG)  
Centre Régional de Recherche Agronomique de Foulaya – Kindia (CRRAF) – **Guinée**
- Institut d'Economie Rurale (IER) - **Mali**
- Institut Sénégalais de Recherches Agricoles/Centre pour le Développement de l'Horticulture (ISRA/CDH) – **Sénégal**
- **APF** : Association pour la Promotion de la Femme (Réseau de transformatrices en Guinée, au Mali et au Sénégal)

# Perspectives

- **Varietal trial :**

- Evaluation of some varieties (to find the **resistant**)
- **Roots stock** trial

- **Grafting :**

- Increase knowledge, develop eventually farmer potential for diversification to increase income
- Communication, management strategy, share knowledge

# Thank you

